



BEST AVAILABLE COPY
#6

SEQUENCE LISTING

<110> WOLFF, Anne M
APPEL, Karen F
PETERSEN, Jesper F
POULSEN, Ulla
ARNAU, Jose
JACOBSEN, Mette D

<120> MUCOR RECOMBINANT GENE EXPRESSION

<130> WOLFF=3

<140> 10/092,947
<141> 2002-03-08

<150> US 60/274,650
<151> 2001-03-12

<160> 65

<170> PatentIn version 3.1

<210> 1
<211> 2525
<212> DNA
<213> Mucor circinelloides

<220>
<221> CDS
<222> (542)..(724)
<223> Exon of pkar

<220>
<221> misc_feature
<222> (798)..(798)
<223> n is a, c, g or t

<220>
<221> CDS
<222> (796)..(1707)
<223> Exon of pkar

<220>
<221> CDS
<222> (1761)..(1928)
<223> Exon of pkar

<220>
<221> Intron
<222> (725)..(795)
<223> Intron of pkar

BEST AVAILABLE COPY

<220>
 <221> Intron
 <222> (1708)..(1760)
 <223> Intron of pkar

<400> 1 aagctttatt catttcactg gtcaacgtaa gtacatttct ctcagtattg gtcgctttta tatcatcttt ttggctgctt tacgtgatga acaaaaacatt atgctactaa acccagctca gtttgagata ttcggtgaaa gaaactattt ccataactga aaaagttaaa ccaaaaagat atatgaaaat gatacattta cttgttcatt tgagctccat attaatcctc ttctcctcta gttggcatgt cttttgcaa gccaaagcta cctatagctc aggtcttatta gatgttatcat cttgatcttt tttgaattga ataaataaaat ttcttgtatt ttaaaatgta acactttaat gcctaatttc tgcgtgcaat gtcgttttt tttctgtgat aaccctgaac tgctcaaatg ctttcatgat gtcatctcat aatctgttgg gttacatcca atactgttaa attgtatgtg ttgatcttga gtataaggga tcgatcattt gattgtcttt ttctctccta ttttcattaa a atg atc act gac gaa cat ccg ttt gaa ttt gcg cct cag caa gat gaa Met Ile Thr Asp Glu His Pro Phe Glu Phe Ala Pro Gln Gln Asp Glu 1 5 10 15	60 120 180 240 300 360 420 480 540 589 637 685 734 794 843 891 939 987
tac acg cag ctg ttg aca gag tta cat aac gaa tac tgc gct gag caa Tyr Thr Gln Leu Leu Thr Glu Leu His Asn Glu Tyr Cys Ala Glu Gln 20 25 30	
cca cta gat gtg ctt cag ttc tgc tcc aac ttt ttc att cgc aaa ctc Pro Leu Asp Val Leu Gln Phe Cys Ser Asn Phe Phe Ile Arg Lys Leu 35 40 45	685
gaa gag cag cgc ttg gag cat aga aac aac cac cat tcc cgtaacaact Glu Glu Gln Arg Leu Glu His Arg Asn Asn His His Ser 50 55 60	734
tgttttagat taaagtgtct ctgccacgag cctagtgtat gatgctaacg tttttcctta	794
g ccn aat gat acc agt aat gat tta cat cct ttg tgt gag caa cca caa Pro Asn Asp Thr Ser Asn Asp Leu His Pro Leu Cys Glu Gln Pro Gln 65 70 75	843
gaa gac ttt tca caa cag caa ggc atc cag tgg gaa acc acg cat atg Glu Asp Phe Ser Gln Gln Gly Ile Gln Trp Glu Thr Thr His Met 80 85 90	891
ggc cat ccc aac gac cac ggt gct ctt cat gat gat gat gat gat ccg Gly His Pro Asn Asp His Gly Ala Leu His Asp Asp Asp Asp Pro 95 100 105	939
ttg gaa gac gaa gac gat gaa gag ttt gac aaa ttt tca act gaa cct Leu Glu Asp Glu Asp Asp Glu Glu Phe Asp Lys Phe Ser Thr Glu Pro 110 115 120 125	987

ttg ccc tcg cct ccc aca aac tat aac cgt ggc cgc cgc aca tct Leu Pro Ser Leu Pro Pro Thr Asn Tyr Asn Arg Gly Arg Arg Thr Ser 130 135 140	1035
gtt aag tgc aga gag cat ggc acc cag cgc caa cca aga ctt tgt caa Val Lys Cys Arg Glu His Gly Thr Gln Arg Gln Pro Arg Leu Cys Gln 145 150 155	1083
ggc cat cat ccc caa atc tca ggc aca agc gag cgc atc aaa gtc tcc Gly His His Pro Gln Ile Ser Gly Thr Ser Glu Arg Ile Lys Val Ser 160 165 170	1131
atc agc aac aac ttt ttg ttt cgc aac ctg gac gaa gag cag tac ctg Ile Ser Asn Asn Phe Leu Phe Arg Asn Leu Asp Glu Glu Gln Tyr Leu 175 180 185	1179
gat gtg gtg aat gcc atg tct gaa aag cgc gtc gtc aag ggc acc aca Asp Val Val Asn Ala Met Ser Glu Lys Arg Val Val Lys Gly Thr Thr 190 195 200 205	1227
gtg atc gag caa ggc agt gtg ggt gat ttc ttc tac gtc gtc gag tcg Val Ile Glu Gln Gly Ser Val Gly Asp Phe Phe Tyr Val Val Glu Ser 210 215 220	1275
ggt act ttg gat tgt ttt att ggg caa aac aag gtt acc aac tat gag Gly Thr Leu Asp Cys Phe Ile Gly Gln Asn Lys Val Thr Asn Tyr Glu 225 230 235	1323
gca ggt ggt agc ttc ggt gaa tta gcc tta atg tac aac gcc cct cgt Ala Gly Gly Ser Phe Gly Glu Leu Ala Leu Met Tyr Asn Ala Pro Arg 240 245 250	1371
gct gct act att att aca aca tca gac tct gtg ctt tgg gct ctg gac Ala Ala Thr Ile Ile Thr Thr Ser Asp Ser Val Leu Trp Ala Leu Asp 255 260 265	1419
aga aac act tcg gca cca tcc ttg atg gag aac acc tca cgc aaa aga Arg Asn Thr Ser Ala Pro Ser Leu Met Glu Asn Thr Ser Arg Lys Arg 270 275 280 285	1467
cgc atg tat gaa tac ttc tta tca gaa gtc gtc ttg tta aaa tcc ctg Arg Met Tyr Glu Tyr Phe Leu Ser Glu Val Val Leu Leu Lys Ser Leu 290 295 300	1515
gaa tca tat gaa cag cat aaa att gcg gat gcc ctc gaa tca gtt tat Glu Ser Tyr Glu Gln His Lys Ile Ala Asp Ala Leu Glu Ser Val Tyr 305 310 315	1563
ttt gaa gat gga cag gag gtt gtg aag cag ggt gat gtc gga gat cag Phe Glu Asp Gly Gln Glu Val Val Lys Gln Gly Asp Val Gly Asp Gln 320 325 330	1611
tcc tac atc att gaa tcc ggt gaa gcc atc gtc ctg aag gaa gag aac Phe Tyr Ile Ile Glu Ser Gly Glu Ala Ile Val Leu Lys Glu Glu Asn 335 340 345	1659
ggc gtc cag caa cag gtg aac cag ctt gag cga gga tcc tac ttt gga	1707

Gly Val Gln Gln Gln Val Asn Gln Leu Glu Arg Gly Ser Tyr Phe Gly			
350	355	360	365
ggtaagatgg agcttggg ggttgtat gtgtcgctaa ccactgtgtg ata gaa			1763
		Glu	
ctg gcc ctg tta aac gat gct cct cga gct gca acc gta gtt gct cac			1811
Leu Ala Leu Leu Asn Asp Ala Pro Arg Ala Ala Thr Val Val Ala His			
370	375	380	
ggc aga ctc aag tgc gct aca ctg ggc aaa aag gca ttc act cgt ctt			1859
Gly Arg Leu Lys Cys Ala Thr Leu Gly Lys Lys Ala Phe Thr Arg Leu			
385	390	395	
ctt ggc cct gtt ttg gac atc ttg aag cgt aat tca gaa aac tat cat			1907
Leu Gly Pro Val Leu Asp Ile Leu Lys Arg Asn Ser Glu Asn Tyr His			
400	405	410	
gct gtc att aac cag caa tca taatcgacc aaaaagttac actagatttc			1958
Ala Val Ile Asn Gln Gln Ser			
415	420		
aaataaaaaac catggatact ttccgatctg atgttgactt gactgtaca aagcgacagg			2018
aaaaagaaaac ttgatttgct tcctgaccaa caatgcagcc aatctcctta aacaagatgc			2078
tctctatttc ggctgaaaaa tataacctcc ttgatttcgt attttgktgt tgtgctttt			2138
tccctctctc tctcttcttc tttcactct tgttataaaa aaaatatgac gggtatgatt			2198
cacagtatgg agagcaaccc ttgatgagcc tccaccta a g c g c c a g c g g c t t c t a			2258
atctgcctgg cacaggtatt gccaatctac caaatcaaag acacaagatt gttgccaaaa			2318
atggcgccaa tttcaccatc atggtttgta gtaagacata tgtatacttg caagtgaaag			2378
gaccaggtaa ctgaattttg cttaggtgaa tcgggtgtcg gaaaaacaac ctttgtaaac			2438
acactgttca catccaccat caaggagcca aagaacctga caaagagaca tctcaagaca			2498
ccttccaaga cggtgcaaat ccagatc			2525

<210> 2
<211> 421
<212> PRT
<213> Mucor circinelloides

<220>
<221> misc_feature
<222> (798)..(798)
<223> n is a, c, g or t

<400> 2

Met Ile Thr Asp Glu His Pro Phe Glu Phe Ala Pro Gln Gln Asp Glu			
1	5	10	15

Tyr Thr Gln Leu Leu Thr Glu Leu His Asn Glu Tyr Cys Ala Glu Gln
20 25 30

Pro Leu Asp Val Leu Gln Phe Cys Ser Asn Phe Phe Ile Arg Lys Leu
35 40 45

Glu Glu Gln Arg Leu Glu His Arg Asn Asn His His Ser Pro Asn Asp
50 55 60

Thr Ser Asn Asp Leu His Pro Leu Cys Glu Gln Pro Gln Glu Asp Phe
65 70 75 80

Ser Gln Gln Gln Gly Ile Gln Trp Glu Thr Thr His Met Gly His Pro
85 90 95

Asn Asp His Gly Ala Leu His Asp Asp Asp Asp Asp Pro Leu Glu Asp
100 105 110

Glu Asp Asp Glu Glu Phe Asp Lys Phe Ser Thr Glu Pro Leu Pro Ser
115 120 125

Leu Pro Pro Thr Asn Tyr Asn Arg Gly Arg Arg Thr Ser Val Lys Cys
130 135 140

Arg Glu His Gly Thr Gln Arg Gln Pro Arg Leu Cys Gln Gly His His
145 150 155 160

Pro Gln Ile Ser Gly Thr Ser Glu Arg Ile Lys Val Ser Ile Ser Asn
165 170 175

Asn Phe Leu Phe Arg Asn Leu Asp Glu Glu Gln Tyr Leu Asp Val Val
180 185 190

Asn Ala Met Ser Glu Lys Arg Val Val Lys Gly Thr Thr Val Ile Glu
195 200 205

Gln Gly Ser Val Gly Asp Phe Phe Tyr Val Val Glu Ser Gly Thr Leu
210 215 220

Asp Cys Phe Ile Gly Gln Asn Lys Val Thr Asn Tyr Glu Ala Gly Gly
225 230 235 240

Ser Phe Gly Glu Leu Ala Leu Met Tyr Asn Ala Pro Arg Ala Ala Thr
 245 250 255

Ile Ile Thr Thr Ser Asp Ser Val Leu Trp Ala Leu Asp Arg Asn Thr
 260 265 270

Ser Ala Pro Ser Leu Met Glu Asn Thr Ser Arg Lys Arg Arg Met Tyr
 275 280 285

Glu Tyr Phe Leu Ser Glu Val Val Leu Leu Lys Ser Leu Glu Ser Tyr
 290 295 300

Glu Gln His Lys Ile Ala Asp Ala Leu Glu Ser Val Tyr Phe Glu Asp
 305 310 315 320

Gly Gln Glu Val Val Lys Gln Gly Asp Val Gly Asp Gln Phe Tyr Ile
 325 330 335

Ile Glu Ser Gly Glu Ala Ile Val Leu Lys Glu Glu Asn Gly Val Gln
 340 345 350

Gln Gln Val Asn Gln Leu Glu Arg Gly Ser Tyr Phe Gly Glu Leu Ala
 355 360 365

Leu Leu Asn Asp Ala Pro Arg Ala Ala Thr Val Val Ala His Gly Arg
 370 375 380

Leu Lys Cys Ala Thr Leu Gly Lys Lys Ala Phe Thr Arg Leu Leu Gly
 385 390 395 400

Pro Val Leu Asp Ile Leu Lys Arg Asn Ser Glu Asn Tyr His Ala Val
 405 410 415

Ile Asn Gln Gln Ser
 420

<210> 3
 <211> 634
 <212> DNA
 <213> Mucor circinelloides

<220>
 <221> CDS
 <222> (1)..(273)
 <223> Exon of ste20

<220>
<221> CDS
<222> (328)..(633)
<223> Exon of ste20

<220>
<221> Intron
<222> (274)..(327)
<223>

<220>
<221> misc_feature
<222> (69)..(69)
<223> n is a, c, g or t

<220>
<221> misc_feature
<222> (326)..(326)
<223> n is i a, c, g or t

<400> 3		
tcc gcc agc aac agg atg cca aaa aga ctg gtc gaa acc gca gag cca		48
Ser Ala Ser Asn Arg Met Pro Lys Arg Leu Val Glu Thr Ala Glu Pro		
1 5 10 15		
tcg cct tca tct caa aca arn atg gac gat ttt gaa atc aaa cag cca		96
Ser Pro Ser Ser Gln Thr Xaa Met Asp Asp Phe Glu Ile Lys Gln Pro		
20 25 30		
ata ggt aac aga tgg acg gca tct gca tgt act gtt act gat aga cac		144
Ile Gly Asn Arg Trp Thr Ala Ser Ala Cys Thr Val Thr Asp Arg His		
35 40 45		
ctg ctt caa ggc tac gga tca tct gcc atg gtt tat agc gca gtg tat		192
Leu Leu Gln Gly Tyr Gly Ser Ser Ala Met Val Tyr Ser Ala Val Tyr		
50 55 60		
ata cct cac aac aaa cgg gtc gcc atc aag gtg att gat ctg gac atg		240
Ile Pro His Asn Lys Arg Val Ala Ile Lys Val Ile Asp Leu Asp Met		
65 70 75 80		
ttt gag cgc aac caa ata gac gag ctg agg gta gtacatggca gcacacacta		293
Phe Glu Arg Asn Gln Ile Asp Glu Leu Arg Val		
85 90		
ggattccctt cttattgaca aaacgtatat atng aga gag aca gcc ttg atg gct		348
Arg Glu Thr Ala Leu Met Ala		
95		
ctg tcc aag cat cca cat gtg ttg cga gtc tac ggc tca ttt gtc cac		396
Leu Ser Lys His Pro His Val Leu Arg Val Tyr Gly Ser Phe Val His		
100 105 110		

```

gga tcc aag ctg tac att gtc act cct tat atg gca gta gga tcc tgt 444
Gly Ser Lys Leu Tyr Ile Val Thr Pro Tyr Met Ala Val Gly Ser Cys
115 120 125 130

ctc gat atc atg aag ttg agt ttc ccc gac ggc cta gac gag att agc 492
Leu Asp Ile Met Lys Leu Ser Phe Pro Asp Gly Leu Asp Glu Ile Ser
135 140 145

att gct act atc cta aaa cag gca ctg gaa gga cta gcc tat ttg cac 540
Ile Ala Thr Ile Leu Lys Gln Ala Leu Glu Gly Leu Ala Tyr Leu His
150 155 160

aaa aat ggc cac atc cat cga gac gta aag gca ggc aac ctg ctg atg 588
Lys Asn Gly His Ile His Arg Asp Val Lys Ala Gly Asn Leu Leu Met
165 170 175

gat gag gac ggc tct gtg ctg ctg gcg gat ggt gtg ctc acc aaa g 634
Asp Glu Asp Gly Ser Val Leu Leu Ala Asp Gly Val Leu Thr Lys
180 185 190

<210> 4
<211> 193
<212> PRT
<213> Mucor circinelloides

<220>
<221> misc_feature
<222> (23)..(23)
<223> The 'Xaa' at location 23 stands for Arg, Ser, Lys, or Asn.

<220>
<221> misc_feature
<222> (69)..(69)
<223> n is a, c, g or t

<220>
<221> misc_feature
<222> (326)..(326)
<223> n is i a, c, g or t

<400> 4

Ser Ala Ser Asn Arg Met Pro Lys Arg Leu Val Glu Thr Ala Glu Pro 80
1 5 10 15

Ser Pro Ser Ser Gln Thr Xaa Met Asp Asp Phe Glu Ile Lys Gln Pro
20 25 30

Ile Gly Asn Arg Trp Thr Ala Ser Ala Cys Thr Val Thr Asp Arg His
35 40 45

Leu Leu Gln Gly Tyr Gly Ser Ser Ala Met Val Tyr Ser Ala Val Tyr
50 55 60

```

Ile Pro His Asn Lys Arg Val Ala Ile Lys Val Ile Asp Leu Asp Met
 65 70 75 80

Phe Glu Arg Asn Gln Ile Asp Glu Leu Arg Val Arg Glu Thr Ala Leu
 85 90 95

Met Ala Leu Ser Lys His Pro His Val Leu Arg Val Tyr Gly Ser Phe
 100 105 110

Val His Gly Ser Lys Leu Tyr Ile Val Thr Pro Tyr Met Ala Val Gly
 115 120 125

Ser Cys Leu Asp Ile Met Lys Leu Ser Phe Pro Asp Gly Leu Asp Glu
 130 135 140

Ile Ser Ile Ala Thr Ile Leu Lys Gln Ala Leu Glu Gly Leu Ala Tyr
 145 150 155 160

Leu His Lys Asn Gly His Ile His Arg Asp Val Lys Ala Gly Asn Leu
 165 170 175

Leu Met Asp Glu Asp Gly Ser Val Leu Leu Ala Asp Gly Val Leu Thr
 180 185 190

Lys

<210> 5
 <211> 541
 <212> DNA
 <213> Mucor circinelloides

<220>
 <221> CDS
 <222> (2)..(133)
 <223> Exon i mkp1

<220>
 <221> CDS
 <222> (190)..(249)
 <223> Exon i mkp1

<220>
 <221> CDS
 <222> (367)..(447)
 <223> Exon i mkp1

<220>
<221> CDS
<222> (506)..(541)
<223> Exon i mkp1

<220>
<221> Intron
<222> (134)..(189)
<223>

<220>
<221> Intron
<222> (250)..(366)
<223>

<220>
<221> Intron
<222> (448)..(505)
<223>

<400> 5		
t tac ata gtt cag gag att atg gag gct gat ctt cac cag att att cgc		49
Tyr Ile Val Gln Glu Ile Met Glu Ala Asp Leu His Gln Ile Ile Arg		
1 5 10 15		
tcc ggc cag ccg ttg acg gat gct cat ttc caa tac ttt gtc tac caa		97
Ser Gly Gln Pro Leu Thr Asp Ala His Phe Gln Tyr Phe Val Tyr Gln		
20 25 30		
atc tgc aga gga cta aag tac att cac agt gcc aat gtaagcatat		143
Ile Cys Arg Gly Leu Lys Tyr Ile His Ser Ala Asn		
35 40		
atagacgatt tgacaacatg cgtattaatg tgcttgctc tcaaag gtg ttg cat		198
Val Leu His		
45		
cga gat ctc aag cca ggt aaa tta cga ata aac ggc ata aca cag atc		246
Arg Asp Leu Lys Pro Gly Lys Leu Arg Ile Asn Gly Ile Thr Gln Ile		
50 55 60		
acg tcgtgatatt tatcatgtga taatttataa acaggcaacc tccttgtcaa		299
Thr		
cgctgattgc gaattaaagg taaggaaaca cagggtgca gacaattcgta catgtattaa		359
atcgagg gaa cca aag att tgt gat ttc ggc ttg gct cgt ggc tat tct		408
Glu Pro Lys Ile Cys Asp Phe Gly Leu Ala Arg Gly Tyr Ser		
65 70 75		
gag aac gac gaa cac aat gtg ggc ttc atg acc gaa tat gtaagttatc		457

Glu Asn Asp Glu His Asn Val Gly Phe Met Thr Glu Tyr
 80 85 90

tgatgcttga gtgtgaggac gtgggtgttaac agtgtgttta tttgaaag gtt gca aca 514
 Val Ala Thr

aga tgg tac cgc gcc cct gaa ata atg 541
 Arg Trp Tyr Arg Ala Pro Glu Ile Met
 95 100

<210> 6
 <211> 103
 <212> PRT
 <213> Mucor circinelloides

<400> 6

Tyr Ile Val Gln Glu Ile Met Glu Ala Asp Leu His Gln Ile Ile Arg
 1 5 10 15

Ser Gly Gln Pro Leu Thr Asp Ala His Phe Gln Tyr Phe Val Tyr Gln
 20 25 30

Ile Cys Arg Gly Leu Lys Tyr Ile His Ser Ala Asn Val Leu His Arg
 35 40 45

Asp Leu Lys Pro Gly Lys Leu Arg Ile Asn Gly Ile Thr Gln Ile Thr
 50 55 60

Glu Pro Lys Ile Cys Asp Phe Gly Leu Ala Arg Gly Tyr Ser Glu Asn
 65 70 75 80

Asp Glu His Asn Val Gly Phe Met Thr Glu Tyr Val Ala Thr Arg Trp
 85 90 95

Tyr Arg Ala Pro Glu Ile Met
 100

<210> 7
 <211> 384
 <212> DNA
 <213> Mucor circinelloides

<220>
 <221> CDS
 <222> (1)...(384)
 <223>

<400> 7
 aag ttt ttt ctt gct acg gct cct gtg aat tgg gag cac aac aaa ccg 48
 Lys Phe Leu Ala Thr Ala Pro Val Asn Trp Glu His Asn Lys Pro
 1 5 10 15

tta aag cgc ttt gca tta cca ggc ggt tca gca gca gca ccc ggc 96
 Leu Lys Arg Phe Ala Leu Pro Gly Gly Ser Ala Ala Ala Pro Gly
 20 25 30

gga cga tcg ccc aac ggc agc ggc gag agc att tcg tgc gtc ttg tgg 144
 Gly Arg Ser Pro Asn Gly Ser Gly Glu Ser Ile Ser Cys Val Leu Trp
 35 40 45

aac gac ctg ttc atc aca ggc acc gac att gtg cgc tcg ctg acc 192
 Asn Asp Leu Phe Phe Ile Thr Gly Thr Asp Ile Val Arg Ser Leu Thr
 50 55 60

ttt cgc ttc cat gcg ttt ggc cga ccc gtt acg aac gca aag aag ttt 240
 Phe Arg Phe His Ala Phe Gly Arg Pro Val Thr Asn Ala Lys Lys Phe
 65 70 75 80

gaa gag ggc ata ttt tct gat ttg cgc aac tta aaa cca ggt cat gat 288
 Glu Glu Gly Ile Phe Ser Asp Leu Arg Asn Leu Lys Pro Gly His Asp
 85 90 95

gct cgg ttg gag gaa ccc aaa tct gaa ttg ctg gac atg ctc tac aag 336
 Ala Arg Leu Glu Glu Pro Lys Ser Glu Leu Leu Asp Met Leu Tyr Lys
 100 105 110

aac aat tgc atc cgc aca caa aaa caa aaa gta ttt ttc tgg ttt 384
 Asn Asn Cys Ile Arg Thr Gln Lys Lys Gln Lys Val Phe Phe Trp Phe
 115 120 125

<210> 8
<211> 128
<212> PRT
<213> Mucor circinelloides

<400> 8

Lys Phe Phe Leu Ala Thr Ala Pro Val Asn Trp Glu His Asn Lys Pro
 1 5 10 15

Leu Lys Arg Phe Ala Leu Pro Gly Gly Ser Ala Ala Ala Pro Gly
 20 25 30

Gly Arg Ser Pro Asn Gly Ser Gly Glu Ser Ile Ser Cys Val Leu Trp
 35 40 45

Asn Asp Leu Phe Phe Ile Thr Gly Thr Asp Ile Val Arg Ser Leu Thr
 50 55 60

Phe Arg Phe His Ala Phe Gly Arg Pro Val Thr Asn Ala Lys Lys Phe

65

70

75

80

Glu Glu Gly Ile Phe Ser Asp Leu Arg Asn Leu Lys Pro Gly His Asp
 85 90 95

Ala Arg Leu Glu Glu Pro Lys Ser Glu Leu Leu Asp Met Leu Tyr Lys
 100 105 110

Asn Asn Cys Ile Arg Thr Gln Lys Lys Gln Lys Val Phe Phe Trp Phe
 115 120 125

<210> 9
<211> 741
<212> DNA
<213> Mucor circinelloides

<400> 9
aagctttcaa atgtgttgg a tgaacaattc atccataat ctctaattgaa atcccgaaga 60
tctacacagg atcacattcg atagatgggg ctgctgttta tgtgattaaa acctcactga 120
tattatctgt ttcatgtaaa aaaaaactct gttgtggtaac aaacattagt gtgaaccacg 180
cgccatccata ccactagtca aaataatgct ctactgcaaa aatgacggt tgacgataaa 240
tgcaacgtaa agatgttta gaaacccttg atatccaaat tacacgtgta gcagccttcg 300
tgggtatTTT tcatacacaac actactagg agtcaggaa tagttcaaac gggcaatttc 360
catcctcatc acactttatt caccaaggaa agaagtggaa tggcatcttc tatcggtcaa 420
catctacagg gacatctgtg agatacatct gattgctcg caagcggaca atagatgaca 480
cgttatcaat gctatca~~c~~tc taaaatgtca tgtctgactg agtccattgc aatcatcact 540
ccatccgaca tcaggtcaca atttatgctt ctatTTCCA atggatccga atccgattca 600
aacaagatta attctccctc aaaataccca tgaagtgtga gacattgcga aatgttataat 660
aaacccaatg catttctcg ttttcagggt tttttcttc ttcttcatac tataatctcta 720
tatatTTTaaatcttaac a 741

<210> 10
<211> 755
<212> DNA
<213> Mucor circinelloides

<400> 10
cgtaattaa gatatgatta gggtgctaat gaatcatatc gattatcttc atcactcgat 60
tagactgccg atcttcttt gcttctgttc gttttccat gtcatctggg ggtacctggg 120

tgtgattgag cgaaaacttc catggaggta actcccgaaa ctttgtttt ctcactggc	180
ttgataaaat gaaaaaacta aaaatctcac gaacatggta caaggggaaa ccttgaaatt	240
agtagcggat gatgccagca taacgatgat ttctctctct ctgctctact cttttatgtt	300
gtggtgattc tcttcacaga gcagcactac tgtcaacatg gagcgatatt ctccaatttc	360
tccaaatgtc ggtatttcat aaattgagat gccttcaaa tgcccttcag atgccttcc	420
aaggcacttg ctaaaataat gcatttgctg gcatacaaac aataactaat tctccgggaa	480
ttgccgggca aatcaccttg tgtgcagtga ttagtatatc gaaaggcggg gatatctaga	540
actttgtttg tgtggtaaca ttaaggtta gaagccttt tttatagcgt cctaccatga	600
cttcatgtgg aggatccaat caagtcttta tttatacctt tgacagggtt aaactaaaaa	660
caatttagaa aaaagaaaaa ctataaaagc catccaacat tccagcaatg cctgcctctc	720
ttcttctctt caacactcta ttctgttaaa caaca	755

<210> 11
<211> 2578
<212> DNA
<213> Mucor circinelloides

<220>
<221> CDS
<222> (534)..(1028)
<223>

<220>
<221> CDS
<222> (1086)..(1307)
<223>

<220>
<221> CDS
<222> (1371)..(2468)
<223>

<220>
<221> Intron
<222> (1029)..(1085)
<223>

<220>
<221> Intron
<222> (1308)..(1370)
<223>

<400> 11		
tcgaaatcaa aggtctgcta ctagtctaatt accacaggaa gcagatattt gatatggaaa	60	
ctgccacgtt attgaaatgc ctctgatcgt atgactagct ggcccaatga acattacatt	120	
ggcccccaaca gccaatcaaa gacgtcccaa tttaaagggg atgttggcat ctaatgttga	180	
tcgcagatag acacacctaa aattatgcac tgtttgggt tacacattga ttttaggtaa	240	
ccacaccatc tagaattcag gacatgtaga agccggtata tgagatggaa ggtacattgt	300	
ttacaagtac tagcgtcaat aaagtatcaa atagattcag tgagtagtct gctatcactc	360	
tatactagcg agcacagtca atcggccat aagaaatagg aacagaaata taccggcaac	420	
atcagtggtc ttcaacggaa tctcaaacat gaaactgtta aatatgagat ggatcttgcc	480	
tattcttctc tcttgctcat tcttctcatac acacatacgt aat atg	536	
Met 1		
gct gat ttc aca gat tct ctc atc aag aac att ggc gtt cac tca tca	584	
Ala Asp Phe Thr Asp Ser Leu Ile Lys Asn Ile Gly Val His Ser Ser		
5 10 15		
tct cct gtc atg aca tct gtc aat atg ggt caa ttg ggt gaa aag ctt	632	
Ser Pro Val Met Thr Ser Val Asn Met Gly Gln Leu Gly Glu Lys Leu		
20 25 30		
cgt caa gct cgt aca aca aca ctt gct tcc tta tct caa gct ctt tca	680	
Arg Gln Ala Arg Thr Thr Leu Ala Ser Leu Ser Gln Ala Leu Ser		
35 40 45		
aag aag ccc gaa gct gct gct gct gcc act gcc ccc aac gct gtt	728	
Lys Lys Pro Glu Ala Ala Ala Ala Thr Ala Pro Asn Ala Val		
50 55 60 65		
aat gaa agt acc acc aca ccc acc aca atg caa ctc cct gct tcg gaa	776	
Asn Glu Ser Thr Thr Pro Thr Thr Met Gln Leu Pro Ala Ser Glu		
70 75 80		
aaa gcc act agt caa ttg gag atc aat gtg gtt gaa gct cgt aat ttg	824	
Lys Ala Thr Ser Gln Leu Glu Ile Asn Val Val Glu Ala Arg Asn Leu		
85 90 95		
acc att gct gat gcg cgc aaa gcc gac acc tac tgt att gtt cat tac	872	
Thr Ile Ala Asp Ala Arg Lys Ala Asp Thr Tyr Cys Ile Val His Tyr		
100 105 110		
gaa ggc aac acc aca tca acg ctt gat aaa gta gat gat ggc atc ttg	920	
Glu Gly Asn Thr Thr Ser Thr Leu Asp Lys Val Asp Asp Gly Ile Leu		
115 120 125		
ccc agc acg cct ctg gtg att aaa tct caa gtc gct agc ggt gca ttc	968	
Pro Ser Thr Pro Leu Val Ile Lys Ser Gln Val Ala Ser Gly Ala Phe		
130 135 140 145		
aag gca ttt gaa atc atg agc gct agt tct ccc aag tgg atg cat	1016	

Lys Ala Phe Glu Ile Met Met Ser Ala Ser Ser Pro Lys Trp Met His 150 155 160	
cgt gtc aac ttg taagttgcta tccagaatat gtcaaaaagg gctctgcgct Arg Val Asn Leu 165	1068
aaccatgtta ctatagt gat gta act gct ggt aac aag gag atc act gtg Asp Val Thr Ala Gly Asn Lys Glu Ile Thr Val 170 175	1118
ttt gtc tat gat cgt ggt aac aaa ttg ccc aat ggt gaa gat cgc ttc Phe Val Tyr Asp Arg Gly Asn Lys Leu Pro Asn Gly Glu Asp Arg Phe 180 185 190	1166
ttg ggc atg tct agc att gtt ccc aac ttg gtc aac aag aag acg gtc Leu Gly Met Ser Ser Ile Val Pro Asn Leu Val Asn Lys Lys Thr Val 195 200 205	1214
gag ctg atc ttt cct ctt cac ggc cgt cct gac gat gat caa gaa gtt Glu Leu Ile Phe Pro Leu His Gly Arg Pro Asp Asp Asp Gln Glu Val 210 215 220	1262
act ggt gat gtc cgt ctt caa gtt act ttt atc gac cct aaa aag Thr Gly Asp Val Arg Leu Gln Val Thr Phe Ile Asp Pro Lys Lys 225 230 235	1307
gtaattttat atgagtatga ttcttgacag ctgatgtctg acacttctaa aaccctattc	1367
aag gct aat ctt aag cca gag gat ttc cgc att gtg cgt atg att ggt Ala Asn Leu Lys Pro Glu Asp Phe Arg Ile Val Arg Met Ile Gly 240 245 250	1415
caa ggc tca gtg ggt aag gtg tat gag gtg atc aag cgt gat tct ggc Gln Gly Ser Val Gly Lys Val Tyr Glu Val Ile Lys Arg Asp Ser Gly 255 260 265 270	1463
cgt acc tat gcc atg aag gtg ctc tct aag cgt ctc ttg ctc gcc gag Arg Thr Tyr Ala Met Lys Val Leu Ser Lys Arg Leu Leu Leu Ala Glu 275 280 285	1511
aat gaa gtc gat act gcc ttc aac gag cgc aat gtg ctg gtt cag tct Asn Glu Val Asp Thr Ala Phe Asn Glu Arg Asn Val Leu Val Gln Ser 290 295 300	1559
ctc tca agc cct ttc att gcc aat ctc aag tac agt ttc caa aca aca Leu Ser Ser Pro Phe Ile Ala Asn Leu Lys Tyr Ser Phe Gln Thr Thr 305 310 315	1607
aac cat ctc ttc ttg gtt atg gat tac ttt ccg ggt ggc gaa ttg ttt Asn His Leu Phe Leu Val Met Asp Tyr Phe Pro Gly Gly Glu Leu Phe 320 325 330	1655
gat ttc ctg gag cgt gag cgt tgt ttg agc gag aag cgt tgc caa ttc Asp Phe Leu Glu Arg Glu Arg Cys Leu Ser Glu Lys Arg Cys Gln Phe 335 340 345 350	1703
ttt gct gcc gag att gtg tgt gcc ttt gac aac atc cat gct cgc aac	1751

Phe Ala Ala Glu Ile Val Cys Ala Phe Asp Asn Ile His Ala Arg Asn	355	360	365
att gtc tat cgt aac ctg aag cca gag agc atc ttg ctg gat gca cat			
Ile Val Tyr Arg Asn Leu Lys Pro Glu Ser Ile Leu Leu Asp Ala His	370	375	380
gga cac att gcc ttg aca gat ttc ggc tta tgc aag caa ttg aag aac			
Gly His Ile Ala Leu Thr Asp Phe Gly Leu Cys Lys Gln Leu Lys Asn	385	390	395
aag atg gat ttg att caa ggt gtg cct caa gtc att aca caa gaa tac			
Lys Met Asp Leu Ile Gln Gly Val Pro Gln Val Ile Thr Gln Glu Tyr	400	405	410
ctc gcc cct gaa atg gta atg caa aag ccc tat ggc atg gct gcc gac			
Leu Ala Pro Glu Met Val Met Gln Lys Pro Tyr Gly Met Ala Ala Asp	415	420	425
430			
tgg tgg agt ctc ggt gtt ttg atg ttt gag ctg ttg act gga tct cct			
Trp Trp Ser Leu Gly Val Leu Met Phe Glu Leu Leu Thr Gly Ser Pro	435	440	445
cct ttc cat tct gtt gaa caa ggt gaa ttg ttt aga caa atc ctg gaa			
Pro Phe His Ser Val Glu Gln Gly Glu Leu Phe Arg Gln Ile Leu Glu	450	455	460
465			
gct ccc att aaa ttc cct gct ggg ggc tgc att aca gag gaa gcc aag			
Ala Pro Ile Lys Phe Pro Ala Gly Gly Cys Ile Thr Glu Glu Ala Lys	465	470	475
480			
gat ttc atc tgc caa ctg ctg gag cgt gat cct gcc aag cgt ctg ggc			
Asp Phe Ile Cys Gln Leu Leu Glu Arg Asp Pro Ala Lys Arg Leu Gly	480	485	490
495			
tcc cat ggt gat gtt gct cag gtc aaa gca cat cca ttc ttt aag gat			
Ser His Gly Asp Val Ala Gln Val Lys Ala His Pro Phe Phe Lys Asp	495	500	505
510			
ctc aac tgg gat gtc gtt tac aag aag caa atg cag ctt ccc ttt gtg			
Leu Asn Trp Asp Val Val Tyr Lys Lys Gln Met Gln Leu Pro Phe Val	515	520	525
530			
ccc gag gta gaa gag cag ctc cgc gaa gaa gcc att gct gct gct gct			
Pro Glu Val Glu Glu Gln Leu Arg Glu Glu Ala Ile Ala Ala Ala Ala	530	535	540
545			
gcc att agc att cct gtg acc aac agc aag acc gag tct acc aat gcc			
Ala Ile Ser Ile Pro Val Thr Asn Ser Lys Thr Glu Ser Thr Asn Ala	545	550	555
560			
aat gtg atg cct gtg gct gat caa tcc aaa ttc aag gga ttt agc tat			
Asn Val Met Pro Val Ala Asp Gln Ser Lys Phe Lys Gly Phe Ser Tyr	560	565	570
575			
att cgt gaa gat gtc atg gca aag aag ggc gag cat cgt ctg ggt gtc			
Ile Arg Glu Asp Val Met Ala Lys Lys Gly Glu His Arg Leu Gly Val	575	580	585
590			

aat cct gag gat gaa gat ccc gaa gtt gat ttc tgg ttt aga cag Asn Pro Glu Asp Glu Asp Pro Glu Val Asp Phe Trp Phe Arg Gln 595 600 605	2468
taaaaatcgt ccatctatcc ttacatttg tacatatata ttaatcaaga cccccctcct	2528
cattcaataa agcacatatt tgttcatata ccaaaaaaaaaa aaaaaaaaaa	2578
<210> 12	
<211> 605	
<212> PRT	
<213> Mucor circinelloides	
<400> 12	
Met Ala Asp Phe Thr Asp Ser Leu Ile Lys Asn Ile Gly Val His Ser 1 5 10 15	
Ser Ser Pro Val Met Thr Ser Val Asn Met Gly Gln Leu Gly Glu Lys 20 25 30	
Leu Arg Gln Ala Arg Thr Thr Leu Ala Ser Leu Ser Gln Ala Leu 35 40 45	
Ser Lys Lys Pro Glu Ala Ala Ala Ala Ala Thr Ala Pro Asn Ala 50 55 60	
Val Asn Glu Ser Thr Thr Pro Thr Thr Met Gln Leu Pro Ala Ser 65 70 75 80	
Glu Lys Ala Thr Ser Gln Leu Glu Ile Asn Val Val Glu Ala Arg Asn 85 90 95	
Leu Thr Ile Ala Asp Ala Arg Lys Ala Asp Thr Tyr Cys Ile Val His 100 105 110	
Tyr Glu Gly Asn Thr Thr Ser Thr Leu Asp Lys Val Asp Asp Gly Ile 115 120 125	
Leu Pro Ser Thr Pro Leu Val Ile Lys Ser Gln Val Ala Ser Gly Ala 130 135 140	
Phe Lys Ala Phe Glu Ile Met Met Ser Ala Ser Ser Pro Lys Trp Met 145 150 155 160	
His Arg Val Asn Leu Asp Val Thr Ala Gly Asn Lys Glu Ile Thr Val	

165

170

175

Phe Val Tyr Asp Arg Gly Asn Lys Leu Pro Asn Gly Glu Asp Arg Phe
 180 185 190

Leu Gly Met Ser Ser Ile Val Pro Asn Leu Val Asn Lys Lys Thr Val
 195 200 205

Glu Leu Ile Phe Pro Leu His Gly Arg Pro Asp Asp Asp Gln Glu Val
 210 215 220

Thr Gly Asp Val Arg Leu Gln Val Thr Phe Ile Asp Pro Lys Lys Ala
 225 230 235 240

Asn Leu Lys Pro Glu Asp Phe Arg Ile Val Arg Met Ile Gly Gln Gly
 245 250 255

Ser Val Gly Lys Val Tyr Glu Val Ile Lys Arg Asp Ser Gly Arg Thr
 260 265 270

Tyr Ala Met Lys Val Leu Ser Lys Arg Leu Leu Leu Ala Glu Asn Glu
 275 280 285

Val Asp Thr Ala Phe Asn Glu Arg Asn Val Leu Val Gln Ser Leu Ser
 290 295 300

Ser Pro Phe Ile Ala Asn Leu Lys Tyr Ser Phe Gln Thr Thr Asn His
 305 310 315 320

Leu Phe Leu Val Met Asp Tyr Phe Pro Gly Gly Glu Leu Phe Asp Phe
 325 330 335

Leu Glu Arg Glu Arg Cys Leu Ser Glu Lys Arg Cys Gln Phe Phe Ala
 340 345 350

Ala Glu Ile Val Cys Ala Phe Asp Asn Ile His Ala Arg Asn Ile Val
 355 360 365

Tyr Arg Asn Leu Lys Pro Glu Ser Ile Leu Leu Asp Ala His Gly His
 370 375 380

Ile Ala Leu Thr Asp Phe Gly Leu Cys Lys Gln Leu Lys Asn Lys Met
 385 390 395 400

Asp Leu Ile Gln Gly Val Pro Gln Val Ile Thr Gln Glu Tyr Leu Ala
 405 410 415

Pro Glu Met Val Met Gln Lys Pro Tyr Gly Met Ala Ala Asp Trp Trp
 420 425 430

Ser Leu Gly Val Leu Met Phe Glu Leu Leu Thr Gly Ser Pro Pro Phe
 435 440 445

His Ser Val Glu Gln Gly Glu Leu Phe Arg Gln Ile Leu Glu Ala Pro
 450 455 460

Ile Lys Phe Pro Ala Gly Gly Cys Ile Thr Glu Glu Ala Lys Asp Phe
 465 470 475 480

Ile Cys Gln Leu Leu Glu Arg Asp Pro Ala Lys Arg Leu Gly Ser His
 485 490 495

Gly Asp Val Ala Gln Val Lys Ala His Pro Phe Phe Lys Asp Leu Asn
 500 505 510

Trp Asp Val Val Tyr Lys Lys Gln Met Gln Leu Pro Phe Val Pro Glu
 515 520 525

Val Glu Glu Gln Leu Arg Glu Glu Ala Ile Ala Ala Ala Ala Ile
 530 535 540

Ser Ile Pro Val Thr Asn Ser Lys Thr Glu Ser Thr Asn Ala Asn Val
 545 550 555 560

Met Pro Val Ala Asp Gln Ser Lys Phe Lys Gly Phe Ser Tyr Ile Arg
 565 570 575

Glu Asp Val Met Ala Lys Lys Gly Glu His Arg Leu Gly Val Asn Pro
 580 585 590

Glu Asp Glu Asp Pro Glu Val Asp Phe Trp Phe Arg Gln
 595 600 605

<210> 13
 <211> 927
 <212> DNA
 <213> Mucor circinelloides

<400> 13
tctttatcac caaatcagca cgagcaattt gctaatctaa ccgtgcaaga cttgtcattc 60
tatgaccaac atccacatTTT gcaacaacaa caacaacaac aacagcaaca ccaccaccac 120
caacaagagc catTAACGTG gacagatTTT ccctttgtA agtactcaaa tttagtcaagt 180
gatAGACTCA cacACTcaca cTCACACAAA CCTCTAGATG aAGATCCCTC TCTCATGATG 240
acaccaacta caccatctat atttacagCT aataacaaca acccctatga tatcccttct 300
tctgcctcaa atgctacaca caccgcATCT actacacata ctactaatac acaaATcata 360
tctGCCGAAG cactgcaaAT tggTACCTGG aagagaatga cATTGAAACC caatgacCTC 420
tcATGCCAGT tcgatAGAGA cAGCAAACtC tTCAGCTGGT gcatccaAGA CGGTATTCC 480
aAGTTCAAAA tggAAATTCCC acaAGAAATTt gtgcaatCCA tcaAGCTATC accCTTAACA 540
agTCGACCTG gCTGGGCAGA ttggAGATGA atgtactATC tactcaACAC atCTTGTtCT 600
acatggagac gCCGCAACAA agCTGGATTc aATGCCGCGA CTACACTGAA gacaAGCAGG 660
cttccatcat cAGCCTGCAC caactAGACG gCCCTGCACT tgcattAAAG gcagaACTAG 720
aatCCCTCTC taaggAAAAC gactATCTAG ctaccatcat tcattaATTt gcatATCATT 780
gattggTgcg cCTGATTAAA attgtgtaat ataaaATACC atgttgacCT ctccccCTCC 840
atTTTCTCT tCTTCTTCTT cttcaacCTT tggTgCTTAt tCTCCCTAA ctTTGAAATA 900
aatcaacttt ctaaacacCCc tataaaaa 927

<210> 14
<211> 419
<212> DNA
<213> Mucor circinelloides

<400> 14
gatctctcgG ttttttttC tcttgcaaca tgtggTACAT gcatTTCCAG ctTggatggC 60
tcactcatTC caaAGAAAGT attcCTTggA tctcaATGC aatccAAATgg AAAACAGATg 120
cttgggtcgt cttggTggCA taaATTggAA aaACTgggtT ttccgttcat aaggTcccAT 180
tttccgtggA aagtctAAAAC tcgactgact ttttccaAT gaggaAGCC tggaggAGgt 240
cgacttgtat cacaacaagg ttgcttatGA aatcaacAGA gtcacatccc gtctAAAACC 300
cagtttggat ccgtttctt cgcttctatC tggggTgcg aggattggT ataaaaAGGA 360
ctagattctc cacaacaatt tccatTTT CCCTCATTAT cattcaataa tactgtAAA 419

<210> 15
<211> 24
<212> DNA

```

<213> Artificial Sequence

<220>
<223> Oligonucleotide primer

<220>
<221> misc_feature
<222> (3)..(3)
<223> n is a, c, g or t

<220>
<221> misc_feature
<222> (18)..(18)
<223> n is a, c, g or t

<220>
<221> misc_feature
<222> (21)..(21)
<223> n is a, c, g or t

<400> 15
ggngaytayt tytaygtngt ngar

```

```

<210> 16
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide primer

<220>
<221> misc_feature
<222> (4)..(4)
<223> n is a, c, g or t

<220>
<221> misc_feature
<222> (7)..(7)
<223> n is a, c, g or t

<220>
<221> misc_feature
<222> (10)..(10)
<223> n is a, c, g or t

<220>
<221> misc_feature
<222> (16)..(16)
<223> n is a, c, g or t

```

<220>
 <221> misc_feature
 <222> (19)..(19)
 <223> n is a, c, g or t

<400> 16
 raangtnacn ckrtcnarng ccca

24

<210> 17
 <211> 36
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide primer

<400> 17
 actgcctcga gatgatcact gacgaacatc cgtttg

36

<210> 18
 <211> 42
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide primer

<400> 18
 acgctagcgg ccgcccgcctg cgcttgagg tggaggctca tc

42

<210> 19
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide primer

<220>
 <221> misc_feature
 <222> (3)..(3)
 <223> n is a, c, g or t

<220>
 <221> misc_feature
 <222> (9)..(9)
 <223> n is a, c, g or t

<220>
 <221> misc_feature
 <222> (12)..(12)

<223> n is a, c, g or t

<220>
 <221> misc_feature
 <222> (18)..(18)
 <223> n is a, c, g or t

<400> 19
 ggnnaarggna cnttyggnc r

21

<210> 20
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide primer

<220>
 <221> misc_feature
 <222> (7)..(7)
 <223> n is a, c, g or t

<220>
 <221> misc_feature
 <222> (13)..(13)
 <223> n is a, c, g or t

<220>
 <221> misc_feature
 <222> (19)..(19)
 <223> n is a, c, g or t

<400> 20
 rttytcnggy ttnarrtcnc krta

24

<210> 21
 <211> 33
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide primer

<220>
 <221> misc_feature
 <222> (13)..(13)
 <223> n is a, c, g or t

<220>

<221> misc_feature
<222> (31)..(31)
<223> n is a, c, g or t

<400> 21
raaccaraar aanacyttyt gyttyttytg ngt

33

<210> 22
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer

<220>
<221> misc_feature
<222> (9)..(9)
<223> n is a, c, g or t

<400> 22
tayathgtnc argarathat g

21

<210> 23
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer

<220>
<221> misc_feature
<222> (10)..(10)
<223> n is a, c, g or t

<220>
<221> misc_feature
<222> (13)..(13)
<223> n is a, c, g or t

<220>
<221> misc_feature
<222> (16)..(16)
<223> n is a, c, g or t

<400> 23
catdatytcn ggngcnckrt acca

24

<210> 24

```

<211> 2471
<212> DNA
<213> Mucor circinelloides

<220>
<221> CDS
<222> (742)..(1038)
<223>

<220>
<221> CDS
<222> (1096)..(1668)
<223>

<220>
<221> CDS
<222> (1725)..(1865)
<223>

<220>
<221> Intron
<222> (1039)..(1095)
<223>

<220>
<221> Intron
<222> (1669)..(1724)
<223>

<220>
<221> misc_feature
<222> (2059)..(2059)
<223> n is a, c, g or t

<220>
<221> misc_feature
<222> (2333)..(2334)
<223> n is a, c, g or t

<400> 24
aagctttcaa atgtgttgg a tgaacaattc atcctataat ctctaattgaa atcccgaaaga 60
tctacacagc atcacattcg atagatgggg ctgctgttta tgtgattaaa acctcactga 120
tattatctgt ttcatgtaaa aaaaaactct gttgtggtag aaacattagt gtgaaccacg 180
cgcagccata ccactagtca aaataatgct ctactgcaaa aaatgacggt tgacgaataa 240
tgcaacgtaa agatggttta gaaacccttg atatccaaat tacacgtgta gcagcattcg 300
tgggtatttt tcatacacaac actacttaggt agctcaggaa tagttcaaac gggcaatttc 360

```

catcctcatc acactttatt caccaaggaa agaagtgaaa tggcatcttc tatcgtaaa	420
catctacagg gacatctgtg agatacatct gattgctcga caagcggaca atagatgaca	480
cgttatcaat gctatcactc taaaatgtca tgtctgactg agtccattgc aatcatcact	540
ccatccgaca tcaggtcaca atttatgctt ctatttcca atggatccga atccgattca	600
aacaagatta attctccctc aaaataccca tgaagtgtga gacattgcga aatgttataat	660
aaacccaatg catttctcggt ctttcaggggt tttttcttc ttcttcatac tatatctcta	720
tatattttat aaattctaac a atg gtt gtt caa gtc ggt att aac ggt ttc Met Val Val Gln Val Gly Ile Asn Gly Phe 1 5 10	771
ggt cgt att ggt cgt att gtc ctt cgt gct act gag tcc aac aag gat Gly Arg Ile Gly Arg Ile Val Leu Arg Ala Thr Glu Ser Asn Lys Asp 15 20 25	819
gtc caa gtt gtt gct atc aac gat ccc ttc att cct ctc gac tat atg Val Gln Val Val Ala Ile Asn Asp Pro Phe Ile Pro Leu Asp Tyr Met 30 35 40	867
gtc tac atg ttg aag tac gat act gtt cac ggt cgt ttc gat ggt tcc Val Tyr Met Leu Lys Tyr Asp Thr Val His Gly Arg Phe Asp Gly Ser 45 50 55	915
gtc gag gcc aag gat ggt aag ctc gtt gtc aac ggt cat gct atc gcc Val Glu Ala Lys Asp Gly Lys Leu Val Val Asn Gly His Ala Ile Ala 60 65 70	963
gtc tct gct gag cgc gat cct acc tct att cct tgg ggt tcc gct ggt Val Ser Ala Glu Arg Asp Pro Thr Ser Ile Pro Trp Gly Ser Ala Gly 75 80 85 90	1011
gct gac tac gtt gtc gag tcc act ggg taaatataact gaaatgcatt Ala Asp Tyr Val Val Glu Ser Thr Gly 95	1058
atatctcgaa tatctaattct aacattgacg taatagt gtc ttc act acc act gaa Val Phe Thr Thr Thr Glu 100 105	1113
gct gcc tct gct cat ctt aag ggt ggt gcc aag aag gtc atc atc tct Ala Ala Ser Ala His Leu Lys Gly Gly Ala Lys Lys Val Ile Ile Ser 110 115 120	1161
gct ccc tct gct gat gcc ccc atg ttc gtc tgt ggt gtc aac ctc gaa Ala Pro Ser Ala Asp Ala Pro Met Phe Val Cys Gly Val Asn Leu Glu 125 130 135	1209
gct tac aag tct gaa tac aag gtt atc tcc aac gcc tct tgt acc acc Ala Tyr Lys Ser Glu Tyr Lys Val Ile Ser Asn Ala Ser Cys Thr Thr 140 145 150	1257
aac tgt ttg gct ccc ctc gcc aag gtc att aac gat aac ttt ggt atc	1305

Asn Cys Leu Ala Pro Leu Ala Lys Val Ile Asn Asp Asn Phe Gly Ile			
155	160	165	
gct gat ggt ttg atg acc act gtc cac gcc acc act gcc acc caa aag			1353
Ala Asp Gly Leu Met Thr Thr Val His Ala Thr Thr Ala Thr Gln Lys			
170	175	180	185
act gtc gat ggt ccc tct cac aag gat tgg aga ggt ggt cgt gcc gct			1401
Thr Val Asp Gly Pro Ser His Lys Asp Trp Arg Gly Gly Arg Ala Ala			
190	195	200	
gct gcc aac atc atc ccc tct tcc act ggt gct gcc aag gct gtc ggt			1449
Ala Ala Asn Ile Ile Pro Ser Ser Thr Gly Ala Ala Lys Ala Val Gly			
205	210	215	
aag gtc att ccc gct ctc aac ggt aag ctc act ggt atg gct ttc cgt			1497
Lys Val Ile Pro Ala Leu Asn Gly Lys Leu Thr Gly Met Ala Phe Arg			
220	225	230	
gtc ccc acc ccc gat gtc tct gtc gtt gat ttg acc gtc aac ctc tcc			1545
Val Pro Thr Pro Asp Val Ser Val Val Asp Leu Thr Val Asn Leu Ser			
235	240	245	
aag ggt gct tct tat gat gaa atc aag caa gcc atc aag aag gcc tct			1593
Lys Gly Ala Ser Tyr Asp Glu Ile Lys Gln Ala Ile Lys Lys Ala Ser			
250	255	260	265
gaa act acc atg aag ggt gtc ctc ggt tac act tct gat gct gtt gtc			1641
Glu Thr Thr Met Lys Gly Val Leu Gly Tyr Thr Ser Asp Ala Val Val			
270	275	280	
agc agt gat ttc gtg ggt gaa gtt tgg taagaaaacgt tattatttca			1688
Ser Ser Asp Phe Val Gly Glu Val Trp			
285	290		
tcgtttgaat agtttactaa cattgaaaat catagt tct tcc gta ttt gac gct			1742
Ser Ser Val Phe Asp Ala			
295			
gct gcc ggt atc caa ttg acc ccc act ttt gtt aag ctt atc gct tgg			1790
Ala Ala Gly Ile Gln Leu Thr Pro Thr Phe Val Lys Leu Ile Ala Trp			
300	305	310	
tat gac aat gag tat ggt tac tct aac cgt gtc gtt gac ctc ctc gtt			1838
Tyr Asp Asn Glu Tyr Gly Tyr Ser Asn Arg Val Val Asp Leu Leu Val			
315	320	325	
cat gcc gct aag gtc gat ggt gct ctc taaatcgtaa atcatttcta			1885
His Ala Ala Lys Val Asp Gly Ala Leu			
330	335		
gtcattgcatacaca catctgttac ataaataaac ttcatgtaaa aagtcgggtca			1945
taagatcggtt ttttgttaat tagcttatat taatttctgt tccaaccctc tgatatgtaa			2005
aatgttgacg aattgcaagt attttgacag gcagaatgac agcatatatt tgangcctgt			2065
gvacaatctg tgttacataa gattcctggt aaaggatgga tgatattata ttttacagtt			2125

ataagagccg gtattggcac acgaaggaag ccttgcagcg agaaggacga cgctctttt	2185
tataggctca tcactcaatg agagttgcag gaagcactat tttgtaaatg cctgaaatac	2245
agagaccctc tggactatta ttctcaagaa gcacttaac aagaaaaata tagttcttt	2305
gctaatttca agaccttaat catatatnnc gcttcattt ttatccatg gtttcattca	2365
atttatagat gtattactac actactgatt gctgttactg ttactatcgc cctggccatt	2425
gttgttgttg ttgtcgctgc catcgcatcg ccgttattgt catcgc	2471

<210> 25
<211> 337
<212> PRT
<213> Mucor circinelloides

<220>
<221> misc_feature
<222> (2059)..(2059)
<223> n is a, c, g or t

<220>
<221> misc_feature
<222> (2333)..(2334)
<223> n is a, c, g or t

<400> 25

Met Val Val Gln Val Gly Ile Asn Gly Phe Gly Arg Ile Gly Arg Ile			
1	5	10	15

Val Leu Arg Ala Thr Glu Ser Asn Lys Asp Val Gln Val Val Ala Ile		
20	25	30

Asn Asp Pro Phe Ile Pro Leu Asp Tyr Met Val Tyr Met Leu Lys Tyr		
35	40	45

Asp Thr Val His Gly Arg Phe Asp Gly Ser Val Glu Ala Lys Asp Gly		
50	55	60

Lys Leu Val Val Asn Gly His Ala Ile Ala Val Ser Ala Glu Arg Asp			
65	70	75	80

Pro Thr Ser Ile Pro Trp Gly Ser Ala Gly Ala Asp Tyr Val Val Glu		
85	90	95

Ser Thr Gly Val Phe Thr Thr Glu Ala Ala Ser Ala His Leu Lys		
100	105	110

Gly Gly Ala Lys Lys Val Ile Ile Ser Ala Pro Ser Ala Asp Ala Pro
 115 120 125

Met Phe Val Cys Gly Val Asn Leu Glu Ala Tyr Lys Ser Glu Tyr Lys
 130 135 140

Val Ile Ser Asn Ala Ser Cys Thr Thr Asn Cys Leu Ala Pro Leu Ala
 145 150 155 160

Lys Val Ile Asn Asp Asn Phe Gly Ile Ala Asp Gly Leu Met Thr Thr
 165 170 175

Val His Ala Thr Thr Ala Thr Gln Lys Thr Val Asp Gly Pro Ser His
 180 185 190

Lys Asp Trp Arg Gly Gly Arg Ala Ala Ala Ala Asn Ile Ile Pro Ser
 195 200 205

Ser Thr Gly Ala Ala Lys Ala Val Gly Lys Val Ile Pro Ala Leu Asn
 210 215 220

Gly Lys Leu Thr Gly Met Ala Phe Arg Val Pro Thr Pro Asp Val Ser
 225 230 235 240

Val Val Asp Leu Thr Val Asn Leu Ser Lys Gly Ala Ser Tyr Asp Glu
 245 250 255

Ile Lys Gln Ala Ile Lys Lys Ala Ser Glu Thr Thr Met Lys Gly Val
 260 265 270

Leu Gly Tyr Thr Ser Asp Ala Val Val Ser Ser Asp Phe Val Gly Glu
 275 280 285

Val Trp Ser Ser Val Phe Asp Ala Ala Ala Gly Ile Gln Leu Thr Pro
 290 295 300

Thr Phe Val Lys Leu Ile Ala Trp Tyr Asp Asn Glu Tyr Gly Tyr Ser
 305 310 315 320

Asn Arg Val Val Asp Leu Leu Val His Ala Ala Lys Val Asp Gly Ala
 325 330 335

Leu

```

<210> 26
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer

<220>
<221> misc_feature
<222> (12)..(12)
<223> n is a, c, g or t

<220>
<221> misc_feature
<222> (15)..(15)
<223> n is a, c, g or t

<220>
<221> misc_feature
<222> (18)..(18)
<223> n is a, c, g or t

<220>
<221> misc_feature
<222> (21)..(21)
<223> n is a, c, g or t

<220>
<221> misc_feature
<222> (24)..(24)
<223> n is a, c, g or t

<220>
<221> misc_feature
<222> (27)..(27)
<223> n is a, c, g or t

<400> 26
aarttyttaa tngcnacngc nccngttaay tgg

```

```

<210> 27
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer

```

```

<220>
<221> misc_feature
<222> (3)..(3)
<223> n is a, c, g or t

```

```

<220>
<221> misc_feature
<222> (6)..(6)
<223> n is a, c, g or t

```

```

<220>
<221> misc_feature
<222> (9)..(9)
<223> n is a, c, g or t

```

```

<220>
<221> misc_feature
<222> (12)..(12)
<223> n is a, c, g or t

```

```

<220>
<221> misc_feature
<222> (18)..(18)
<223> n is a, c, g or t

```

<400> 27
ccnggnmngn tnaayytnat hgg

23

```

<210> 28
<211> 20
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> oligonucleotide primer

```

```

<220>
<221> misc_feature
<222> (3)..(3)
<223> n is a, c, g or t

```

```

<220>
<221> misc_feature
<222> (9)..(9)
<223> n is a, c, g or t

```

```

<220>
<221> misc_feature
<222> (12)..(12)

```

<223> n is a, c, g or t

<220>
 <221> misc_feature
 <222> (15)..(15)
 <223> n is a, c, g or t

<220>
 <221> misc_feature
 <222> (18)..(18)
 <223> n is a, c, g or t

<400> 28
 ccnccccanc cngcnccngt

20

<210> 29
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide primer

<220>
 <221> misc_feature
 <222> (9)..(9)
 <223> n is a, c, g or t

<220>
 <221> misc_feature
 <222> (18)..(18)
 <223> n is a, c, g or t

<400> 29
 garcayggna thcarccnga ygg

23

<210> 30
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide primer

<220>
 <221> misc_feature
 <222> (4)..(4)
 <223> n is a, c, g or t

<220>

<221> misc_feature
<222> (10)..(10)
<223> n is a, c, g or t

<220>
<221> misc_feature
<222> (13)..(13)
<223> n is a, c, g or t

<400> 30
catnccytcn ccnacrtacc a

21

<210> 31
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer

<400> 31
catccttgtt ggactcagta gc

22

<210> 32
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer

<400> 32
cttcagggtt agagagagaa gc

22

<210> 33
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer

<400> 33
ccttgggtt ttcgagggag g

21

<210> 34
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer

<400> 34			
actgcggagc tcattatgtat cactgacgaa catccg	36		
<210> 35			
<211> 29			
<212> DNA			
<213> Artificial Sequence			
<220>			
<223> oligonucleotide primer			
<400> 35			
gcgcatgctt atgattgctg gttaatgac	29		
<210> 36			
<211> 427			
<212> PRT			
<213> Mucor circinelloides			
<400> 36			
Met Ile Thr Asp Glu His Pro Phe Glu Phe Ala Pro Gln Gln Asp Glu			
1	5	10	15
Tyr Thr Gln Leu Leu Thr Glu Leu His Asn Glu Tyr Cys Ala Glu Gln			
20	25	30	.
Pro Leu Asp Val Leu Gln Phe Cys Ser Asn Phe Phe Ile Arg Lys Leu			
35	40	45	
Glu Glu Gln Arg Leu Glu His Arg Asn Asn His Ser Arg Asn Asn			
50	55	60	
Leu Phe Asp Thr Asn Asp Thr Ser Asn Asp Leu His Pro Leu Cys Glu			
65	70	75	80
Gln Pro Gln Glu Asp Phe Ser Gln Gln Gly Ile Gln Trp Glu Thr			
85	90	95	
Thr His Met Gly His Pro Asn Asp His Gly Ala Leu His Asp Asp Asp			
100	105	110	
Asp Asp Pro Leu Glu Asp Glu Asp Asp Glu Glu Phe Asp Lys Phe Ser			
115	120	125	
Thr Glu Pro Leu Pro Ser Leu Pro Pro Thr Asn Tyr Asn Arg Gly Arg			
130	135	140	

Arg Thr Ser Val Lys Cys Arg Glu His Gly Thr Gln Arg Gln Pro Arg
 145 150 155 160

Leu Cys Gln Gly His His Pro Gln Ile Ser Gly Thr Ser Glu Arg Ile
 165 170 175

Lys Val Ser Ile Ser Asn Asn Phe Leu Phe Arg Asn Leu Asp Glu Glu
 180 185 190

Gln Tyr Leu Asp Val Val Asn Ala Met Ser Glu Lys Arg Val Val Lys
 195 200 205

Gly Thr Thr Val Ile Glu Gln Gly Ser Val Gly Asp Phe Phe Tyr Val
 210 215 220

Val Glu Ser Gly Thr Leu Asp Cys Phe Ile Gly Gln Asn Lys Val Thr
 225 230 235 240

Asn Tyr Glu Ala Gly Gly Ser Phe Gly Glu Leu Ala Leu Met Tyr Asn
 245 250 255

Ala Pro Arg Ala Ala Thr Ile Ile Thr Thr Ser Asp Ser Val Leu Trp
 260 265 270

Ala Leu Asp Arg Asn Thr Ser Ala Pro Ser Leu Met Glu Asn Thr Ser
 275 280 285

Arg Lys Arg Arg Met Tyr Glu Tyr Phe Leu Ser Glu Val Val Leu Leu
 290 295 300

Lys Ser Leu Glu Ser Tyr Glu Gln His Lys Ile Ala Asp Ala Leu Glu
 305 310 315 320

Ser Val Tyr Phe Glu Asp Gly Gln Glu Val Val Lys Gln Gly Asp Val
 325 330 335

Gly Asp Gln Phe Tyr Ile Ile Glu Ser Gly Glu Ala Ile Val Leu Lys
 340 345 350

Glu Glu Asn Gly Val Gln Gln Val Asn Gln Leu Glu Arg Gly Ser
 355 360 365

Tyr Phe Gly Glu Leu Ala Leu Leu Asn Asp Ala Pro Arg Ala Ala Thr
 370 375 380

Val Val Ala His Gly Arg Leu Lys Cys Ala Thr Leu Gly Lys Lys Ala
 385 390 395 400

Phe Thr Arg Leu Leu Gly Pro Val Leu Asp Ile Leu Lys Arg Asn Ser
 405 410 415

Glu Asn Tyr His Ala Val Ile Asn Gln Gln Ser
 420 425

<210> 37
 <211> 411
 <212> PRT
 <213> Aspergillus niger

<400> 37

Met Ala Glu Ser Ala Phe Pro Ser Ala Gln Gln Pro Leu Arg Val Gly
 1 5 10 15

Thr Lys Asp Asp Lys Ala Ala Ala Phe Gln Lys Ile Ser Glu Glu Asp
 20 25 30

Glu Tyr Glu Val Thr Ser Pro Thr Asp Pro Thr Phe Arg Ser Ala Asn
 35 40 45

Ala Ala Ala Ala Ser Ser Ser Thr Gly Ser Pro Phe Phe Gly Ser
 50 55 60

Tyr Gly Glu Asn Ser Gly Pro Ile Arg Phe Asn Arg Ser Pro Phe Asp
 65 70 75 80

Asn Gly Pro Arg Glu Glu Asp Glu Glu Gly Ala Asp Glu Phe Pro Pro
 85 90 95

Glu Asp Ile Arg Pro Thr Gly Ala Ala Asn Gln Gly Phe Pro Asn Asn
 100 105 110

Tyr Ala Leu Gly Arg Arg Thr Ser Val Ser Ala Glu Ser Leu Asn Pro
 115 120 125

Thr Ser Ala Gly Ser Asp Ser Trp Thr Pro Pro Tyr His Glu Lys Thr
 130 135 140

Glu Glu Gln Leu Ser Arg Leu Lys Thr Ala Val Ser Ser Asn Phe Leu
 145 150 155 160

Phe Ser His Leu Asp Asp Asp Gln Phe Lys Ser Val Leu Asp Ala Leu
 165 170 175

Val Glu Lys Pro Ile Pro Ala Lys Gly Ile Lys Val Ile Ser Gln Gly
 180 185 190

Asp Ala Gly Asp Tyr Phe Tyr Ile Val Glu Asn Gly His Phe Asp Phe
 195 200 205

Met Ile His Pro Ser Gly Ser Val Gln Pro Gly Pro Asp Gly Met Gly
 210 215 220

Asn Lys Val Gly Ser Val Gly Pro Gly Gly Ser Phe Gly Glu Leu Ala
 225 230 235 240

Leu Met Tyr Asn Ala Pro Arg Ala Ala Thr Val Val Ser Val Asp Pro
 245 250 255

Lys Ser Thr Leu Trp Ala Leu Asp Arg Ile Thr Phe Arg Arg Ile Leu
 260 265 270

Met Asp Ser Ala Phe Gln Arg Arg Met Tyr Glu Ala Phe Leu Glu
 275 280 285

Glu Val Pro Leu Leu Ser Ser Leu Lys Pro Tyr Glu Arg Ala Lys Ile
 290 295 300

Ala Asp Ala Leu Asp Ala Ile Lys Tyr Pro Ala Gly Ser Thr Ile Ile
 305 310 315 320

Ala Glu Gly Asp Pro Gly Asp Ala Phe Tyr Leu Leu Glu Ser Gly Glu
 325 330 335

Ala Asp Ala Phe Lys Asn Gly Val Glu Gly Pro Val Lys Ser Tyr Lys
 340 345 350

Arg Gly Asp Tyr Phe Gly Glu Leu Ala Leu Leu Asp Asp Lys Pro Arg
 355 360 365

Ala Ala Ser Ile Val Ala Lys Thr Asp Val Lys Val Ala Lys Leu Gly

370

375

380

Arg Asp Gly Phe Lys Arg Leu Leu Gly Pro Val Glu Asp Ile Met Arg
385 390 395 400

Arg Ala Glu Tyr Glu Ser Asn Pro Val Pro Ala
405 410

<210> 38
<211> 403
<212> PRT

Met Ala Asp Tyr Thr Ile Pro Ser Glu Leu Pro Pro Ile Leu Lys Asp
 1 5 10 15

Leu Ser Arg Glu Val Leu Arg His Gln Pro Ala Asp Leu Val Gln Phe
20 25 30

Cys His Asp Tyr Phe Ala Lys Leu Leu Ala Gln Gln Arg Lys Val Leu
 35 40 45

Met Asp Ser Ala Asp Pro Ala Thr Lys Ala Thr Ile Ala Ser Thr Ala
50 55 60

Gly Pro Ala Val Asp Ala Asp Glu Ala Ala Arg Ala Asn Ser Tyr Ala
65 70 75 80

Tyr Ser Thr Asp Asp Gly Phe Gly Thr Glu Asp Asp Asp Asp Asp Asp Asp Asp Asp
85 90 95

Asp Asp Glu Asp Asp Glu Ala Ala Ile Pro Pro Pro Val Val Asn Arg
100 105 110

Gly Arg Arg Thr Ser Val Ser Ala Glu Ser Met Ala Pro Thr Ala His
 115 120 125

Asp Val Asp Ala Val Lys Thr Val Ile Pro Lys Ser Asp Glu Gln Arg
130 135 140

Ala Arg Ile Gln Ala Ser Ile Gly Asn Asn Phe Leu Phe Arg Asn Leu
145 150 155 160

Asp Glu Asp Gln Tyr Thr Asp Val Val Asn Ala Met Ala Glu Lys Lys
 165 170 175

Val Ala Ala Gly Glu Val Val Ile Arg Gln Gly Gly Val Gly Asp Tyr
 180 185 190

Phe Tyr Val Val Glu Thr Gly Ala Leu Asp Val Phe Val Asn Arg Asn
 195 200 205

Gly Asn Gly Asp Val Lys Val Thr Asp Tyr Ser Ala Gly Gly Ser Phe
 210 215 220

Gly Glu Leu Ala Leu Met Tyr Asn Ala Pro Arg Ala Ala Thr Val Val
 225 230 240

Ala Thr Ala Glu Ser Val Leu Trp Ala Leu Asp Arg Val Thr Phe Arg
 245 250 255

Arg Ile Leu Met Asp His Thr Ser Arg Lys Arg Arg Met Tyr Glu Ala
 260 265 270

Phe Leu Glu Glu Val Pro Leu Leu Ser Ser Leu Glu Pro Tyr Glu Arg
 275 280 285

His Lys Ile Ala Asp Ala Leu Glu Ser Val Ala Tyr Ala Asp Gly Asp
 290 295 300

Val Val Ile Arg Gln Gly Asp Val Gly Glu Asn Phe Tyr Ile Ile Glu
 305 310 320

Ala Gly Asp Ala Glu Val Ile Lys Ile Asp Glu Asn Gly Glu Glu His
 325 330 335

His Phe Arg Pro Leu His Lys Gly Asn Tyr Phe Gly Glu Leu Ala Leu
 340 345 350

Leu Ser Asp Lys Pro Arg Val Ala Thr Ile Arg Ala Lys Gly Lys Leu
 355 360 365

Lys Cys Ala Lys Leu Gly Lys Lys Ala Phe Thr Arg Leu Leu Gly Pro
 370 375 380

Leu Ala Asp Ile Met Gln Arg Asn Thr Gln Asp Tyr Glu Lys Tyr Pro
 385 390 395 400

Gly Glu His

<210> 39
<211> 459
<212> PRT
<213> Candida albicans

<400> 39

Met Ser Asn Pro Gln Gln Gln Phe Ile Ser Asp Glu Leu Ser Gln Leu
1 5 10 15

Gln Lys Glu Ile Ile Ser Lys Asn Pro Gln Asp Val Leu Gln Phe Cys
20 25 30

Ala Asn Tyr Phe Asn Thr Lys Leu Gln Ala Gln Arg Ser Glu Leu Trp
35 40 45

Ser Gln Gln Ala Lys Ala Glu Ala Ala Gly Ile Asp Leu Phe Pro Ser
50 55 60

Val Asp His Val Asn Val Asn Ser Ser Gly Val Ser Ile Val Asn Asp
65 70 75 80

Arg Gln Pro Ser Phe Lys Ser Pro Phe Gly Val Asn Asp Pro His Ser
85 90 95

Asn His Asp Glu Asp Pro His Ala Lys Asp Thr Lys Thr Asp Thr Ala
100 105 110

Ala Ala Ala Val Gly Gly Ile Phe Lys Ser Asn Phe Asp Val Lys
115 120 125

Lys Ser Ala Ser Asn Pro Pro Thr Lys Glu Val Asp Pro Asp Asp Pro
130 135 140

Ser Lys Pro Ser Ser Ser Gln Pro Asn Gln Gln Ser Ala Ser Ala
145 150 155 160

Ser Ser Lys Thr Pro Ser Ser Lys Ile Pro Val Ala Phe Asn Ala Asn
165 170 175

Arg Arg Thr Ser Val Ser Ala Glu Ala Leu Asn Pro Ala Lys Leu Lys

180	185	190
Leu Asp Ser Trp Lys Pro Pro Val Asn Asn Leu Ser Ile Thr Glu Glu		
195	200	205
Glu Thr Leu Ala Asn Asn Leu Lys Asn Asn Phe Leu Phe Lys Gln Leu		
210	215	220
Asp Ala Asn Ser Lys Lys Thr Val Ile Ala Ala Leu Gln Gln Lys Ser		
225	230	235
Phe Ala Lys Asp Thr Val Ile Ile Gln Gln Gly Asp Glu Gly Asp Phe		
245	250	255
Phe Tyr Ile Ile Glu Thr Gly Thr Val Asp Phe Tyr Val Asn Asp Ala		
260	265	270
Lys Val Ser Ser Ser Glu Gly Ser Ser Phe Gly Glu Leu Ala Leu		
275	280	285
Met Tyr Asn Ser Pro Arg Ala Ala Thr Ala Val Ala Ala Thr Asp Val		
290	295	300
Val Cys Trp Ala Leu Asp Arg Leu Thr Phe Arg Arg Ile Leu Leu Glu		
305	310	315
Gly Thr Phe Asn Lys Arg Leu Met Tyr Glu Asp Phe Leu Lys Asp Ile		
325	330	335
Glu Val Leu Lys Ser Leu Ser Asp His Ala Arg Ser Lys Leu Ala Asp		
340	345	350
Ala Leu Ser Thr Glu Met Tyr His Lys Gly Asp Lys Ile Val Thr Glu		
355	360	365
Gly Glu Gln Gly Glu Asn Phe Tyr Leu Ile Glu Ser Gly Asn Cys Gln		
370	375	380
Val Tyr Asn Glu Lys Leu Gly Asn Ile Lys Gln Leu Thr Lys Gly Asp		
385	390	395
Tyr Phe Gly Glu Leu Ala Leu Ile Lys Asp Leu Pro Arg Gln Ala Thr		
405	410	415

Val Glu Ala Leu Asp Asn Val Ile Val Ala Thr Leu Gly Lys Ser Gly
 420 425 430

Phe Gln Arg Leu Leu Gly Pro Val Val Glu Val Leu Lys Glu Gln Asp
 435 440 445

Pro Thr Lys Ser Gln Asp Pro Thr Ala Gly His
 450 455

<210> 40
 <211> 415
 <212> PRT
 <213> *Saccharomyces cerevisiae*

<400> 40

Val Ser Ser Leu Pro Lys Glu Ser Gln Ala Glu Leu Gln Leu Phe Gln
 1 5 10 15

Asn Glu Ile Asn Ala Ala Asn Pro Ser Asp Phe Leu Gln Phe Ser Ala
 20 25 30

Asn Tyr Phe Asn Lys Arg Leu Glu Gln Gln Arg Ala Phe Leu Lys Ala
 35 40 45

Arg Glu Pro Glu Phe Lys Ala Lys Asn Ile Val Leu Phe Pro Glu Pro
 50 55 60

Glu Glu Ser Phe Ser Arg Pro Gln Ser Ala Gln Ser Gln Ser Arg Ser
 65 70 75 80

Arg Ser Ser Val Met Phe Lys Ser Pro Phe Val Asn Glu Asp Pro His
 85 90 95

Ser Asn Val Phe Lys Ser Gly Phe Asn Leu Asp Pro His Glu Gln Asp
 100 105 110

Thr His Gln Gln Ala Gln Glu Glu Gln Gln His Thr Arg Glu Lys Thr
 115 120 125

Ser Thr Pro Pro Leu Pro Met His Phe Asn Ala Gln Arg Arg Thr Ser
 130 135 140

Val Ser Gly Glu Thr Leu Gln Pro Asn Asn Phe Asp Asp Trp Thr Pro
 145 150 155 160

Asp His Tyr Lys Glu Lys Ser Glu Gln Gln Leu Gln Arg Leu Glu Lys
165 170 175

Ser Ile Arg Asn Asn Phe Leu Phe Asn Lys Leu Asp Ser Asp Ser Lys
180 185 190

Arg Leu Val Ile Asn Cys Leu Glu Glu Lys Ser Val Pro Lys Gly Ala
195 200 205

Thr Ile Ile Lys Gln Gly Asp Gln Gly Asp Tyr Phe Tyr Val Val Glu
210 215 220

Lys Gly Thr Val Asp Phe Tyr Val Asn Asp Asn Lys Val Asn Ser Ser
225 230 235 240

Gly Pro Gly Ser Ser Phe Gly Glu Leu Ala Leu Met Tyr Asn Ser Pro
245 250 255

Arg Ala Ala Thr Val Val Ala Thr Ser Asp Cys Leu Leu Trp Ala Leu
260 265 270

Asp Arg Leu Thr Phe Arg Lys Ile Leu Leu Gly Ser Ser Phe Lys Lys
275 280 285

Arg Leu Met Tyr Asp Asp Leu Leu Lys Ser Met Pro Val Leu Lys Ser
290 295 300

Leu Thr Thr Tyr Asp Arg Ala Lys Leu Ala Asp Ala Leu Asp Thr Lys
305 310 315 320

Ile Tyr Gln Pro Gly Glu Thr Ile Ile Arg Glu Gly Asp Gln Gly Glu
325 330 335

Asn Phe Tyr Leu Ile Glu Tyr Gly Ala Val Asp Val Ser Lys Lys Gly
340 345 350

Gln Gly Val Ile Asn Lys Leu Lys Asp His Asp Tyr Phe Gly Glu Val
355 360 365

Ala Leu Leu Asn Asp Leu Pro Arg Gln Ala Thr Val Thr Ala Thr Lys
370 375 380

Arg Thr Lys Val Ala Thr Leu Gly Lys Ser Gly Phe Gln Arg Leu
385 390 395 400

Gly Pro Ala Val Asp Val Leu Lys Leu Asn Asp Pro Thr Arg His
405 410 415

<210> 41
<211> 412
<212> PRT
<213> *Schizosaccharomyces pombe*

<400> 41

Met	Ser	Phe	Glu	Glu	Val	Tyr	Glu	Glu	Leu	Lys	Ala	Leu	Val	Asp	Glu
1				5					10					15	

Gln Asn Pro Ser Asp Val Leu Gln Phe Cys Tyr Asp Phe Phe Gly Glu
20 25 30

Lys Leu Lys Ala Glu Arg Ser Val Phe Arg Arg Gly Asp Thr Ile Thr
35 40 45

Glu Ser Phe Ser Asp Gly Asp Glu Ser Asp Phe Leu Ser Glu Leu Asn
 50 55 60

Asp Met Val Ala Gly Pro Glu Ala Ile Gly Pro Asp Ala Lys Tyr Val
65 70 75 80

Pro Glu Leu Gly Gly Leu Lys Glu Met Asn Val Ser Tyr Pro Gln Asn
85 90 95

Ser Ala Phe Ala Leu Glu Thr Lys Arg Thr Phe Pro Pro Lys Asp Pro
115 120 125

Glu Asp Leu Lys Arg Leu Lys Arg Ser Val Ala Gly Asn Phe Leu Phe
130 135 140

Lys Asn Leu Asp Glu Glu His Tyr Asn Glu Val Leu Asn Ala Met Thr
 145 150 155 160

Glu Lys Arg Ile Gly Glu Ala Gly Val Ala Val Ile Val Gln Gly Ala
165 170 175

Val Gly Asp Tyr Phe Tyr Ile Val Glu Gln Gly Glu Phe Asp Val Tyr
 180 185 190

Lys Arg Pro Glu Leu Asn Ile Thr Pro Glu Glu Val Leu Ser Ser Gly
 195 200 205

Tyr Gly Asn Tyr Ile Thr Thr Ile Ser Pro Gly Glu Tyr Phe Gly Glu
 210 215 220

Leu Ala Leu Met Tyr Asn Ala Pro Arg Ala Ala Ser Val Val Ser Lys
 225 230 235 240

Thr Pro Asn Asn Val Ile Tyr Ala Leu Asp Arg Thr Ser Phe Arg Arg
 245 250 255

Ile Val Phe Glu Asn Ala Tyr Arg Gln Arg Met Leu Tyr Glu Ser Leu
 260 265 270

Leu Glu Glu Val Pro Ile Leu Ser Ser Leu Asp Lys Tyr Gln Arg Gln
 275 280 285

Lys Ile Ala Asp Ala Leu Gln Thr Val Val Tyr Gln Ala Gly Ser Ile
 290 295 300

Val Ile Arg Gln Gly Asp Ile Gly Asn Gln Phe Tyr Leu Ile Glu Asp
 305 310 315 320

Gly Glu Ala Glu Val Val Lys Asn Gly Lys Gly Val Val Val Thr Leu
 325 330 335

Thr Lys Gly Asp Tyr Phe Gly Glu Leu Ala Leu Ile His Glu Thr Val
 340 345 350

Arg Asn Ala Thr Val Gln Ala Lys Thr Arg Leu Lys Leu Ala Thr Phe
 355 360 365

Asp Lys Pro Thr Phe Asn Arg Leu Leu Gly Asn Ala Ile Asp Leu Met
 370 375 380

Arg Asn Gln Pro Arg Ala Arg Met Gly Met Asp Asn Glu Tyr Gly Asp
 385 390 395 400

Gln Ser Leu His Arg Ser Pro Pro Ser Thr Lys Ala

405

410

<210> 42
<211> 240
<212> PRT
<213> Mucor rouxii

<400> 42

Met	Asp	Glu	Glu	His	Tyr	Gln	Asp	Ile	Val	Asn	Ala	Met	Ile	Glu	Lys
1					5				10					15	

Pro	Val	Arg	Lys	Gly	Glu	Thr	Ile	Ile	Glu	Gln	Gly	Ala	Val	Gly	Asp
						20		25					30		

Tyr	Phe	Tyr	Val	Val	Ala	Ser	Gly	Thr	Phe	Asp	Cys	Tyr	Ile	Lys	Lys
						35		40				45			

Pro	Gly	Gln	Glu	Lys	Pro	Leu	Lys	Val	Thr	Ser	Tyr	Glu	Arg	Gly	Gly
					50		55				60				

Ser	Phe	Gly	Glu	Leu	Ala	Leu	Met	Tyr	Asn	Ala	Pro	Arg	Ala	Ala	Thr
65					70				75				80		

Val	Thr	Ser	Thr	Ser	Glu	Ser	Val	Leu	Trp	Ala	Leu	Asp	Arg	Val	Thr
					85			90				95			

Phe	Arg	Thr	Ile	Leu	Met	Glu	Asn	Thr	Ala	Leu	Lys	Arg	Arg	Val	Tyr
					100			105			110				

Glu	Ser	Phe	Leu	Glu	Glu	Val	Ala	Leu	Leu	Ile	Ser	Leu	Glu	Pro	Tyr
						115		120			125				

Glu	Arg	His	Lys	Ile	Ala	Asp	Ser	Leu	Glu	Thr	Ile	Phe	Phe	Asn	Asp
						130		135			140				

Asn	Gly	His	Val	Ile	Ser	Gln	Gly	Asp	Ile	Gly	Asp	Gln	Phe	Tyr	Ile
145						150			155			160			

Ile	Glu	Ser	Gly	Ser	Ala	Ile	Val	Tyr	Lys	Thr	Asp	Ser	Asn	Gly	Asp
						165		170			175				

Gln	Gln	Met	Val	Asn	Gln	Leu	Glu	Arg	Gly	Ala	Tyr	Phe	Gly	Glu	Leu
						180		185			190				

Ala Leu Leu Asn Asp Cys Pro Arg Ala Ala Thr Val Ile Ala Lys Gly
 195 200 205

Thr Leu Arg Cys Val Thr Leu Gly Lys Lys Ala Phe Thr Arg Leu Leu
 210 215 220

Gly Pro Val His Glu Ile Leu Lys Arg Asn Ala Glu Asn Tyr Gln Ala
 225 230 235 240

Ile Leu Ser Gln Gln Gln Tyr
 245

<210> 43

<211> 605

<212> PRT

<213> Mucor circinelloides

<400> 43

Met Ala Asp Phe Thr Asp Ser Leu Ile Lys Asn Ile Gly Val His Ser
 1 5 10 15

Ser Ser Pro Val Met Thr Ser Val Asn Met Gly Gln Leu Gly Glu Lys
 20 25 30

Leu Arg Gln Ala Arg Thr Thr Leu Ala Ser Leu Ser Gln Ala Leu
 35 40 45

Ser Lys Lys Pro Glu Ala Ala Ala Ala Ala Ala Thr Ala Pro Asn Ala
 50 55 60

Val Asn Glu Ser Thr Thr Pro Thr Thr Met Gln Leu Pro Ala Ser
 65 70 75 80

Glu Lys Ala Thr Ser Gln Leu Glu Ile Asn Val Val Glu Ala Arg Asn
 85 90 95

Leu Thr Ile Ala Asp Ala Arg Lys Ala Asp Thr Tyr Cys Ile Val His
 100 105 110

Tyr Glu Gly Asn Thr Thr Ser Thr Leu Asp Lys Val Asp Asp Gly Ile
 115 120 125

Leu Pro Ser Thr Pro Leu Val Ile Lys Ser Gln Val Ala Ser Gly Ala
 130 135 140

Phe Lys Ala Phe Glu Ile Met Met Ser Ala Ser Ser Pro Lys Trp Met
 145 150 155 160

His Arg Val Asn Phe Asp Val Thr Ala Gly Asn Lys Glu Ile Thr Val
 165 170 175

Ser Val Tyr Asp Arg Gly Asn Lys Leu Pro Asn Gly Glu Asp Arg Phe
 180 185 190

Leu Gly Met Ser Ser Ile Val Pro Asn Leu Val Asn Lys Lys Thr Val
 195 200 205

Glu Leu Ile Phe Pro Leu His Gly Arg Pro Asp Asp Asp Gln Glu Val
 210 215 220

Thr Gly Asp Val Arg Leu Gln Val Thr Phe Ile Asp Pro Lys Lys Ala
 225 230 235 240

Asn Leu Lys Pro Glu Asp Phe Arg Ile Val Arg Met Ile Gly Gln Gly
 245 250 255

Ser Val Gly Lys Val Tyr Glu Val Ile Lys Arg Asp Ser Gly Arg Thr
 260 265 270

Tyr Ala Met Lys Val Leu Ser Lys Arg Leu Leu Leu Ala Glu Asn Glu
 275 280 285

Val Asp Thr Ala Phe Asn Glu Arg Asn Val Leu Val Gln Ser Leu Ser
 290 295 300

Ser Pro Phe Ile Ala Asn Leu Lys Tyr Ser Phe Gln Thr Thr Asn His
 305 310 315 320

Leu Phe Leu Val Met Asp Tyr Phe Pro Gly Gly Glu Leu Phe Asp Phe
 325 330 335

Leu Glu Arg Glu Arg Cys Leu Ser Glu Lys Arg Cys Gln Phe Phe Ala
 340 345 350

Ala Glu Ile Val Cys Ala Phe Asp Asn Ile His Ala Arg Asn Ile Val
 355 360 365

Tyr Arg Asn Leu Lys Pro Glu Ser Ile Leu Leu Asp Ala His Gly His
 370 375 380

Ile Ala Leu Thr Asp Phe Gly Leu Cys Lys Gln Leu Lys Asn Lys Met

385

390

395

400

Asp Leu Ile Gln Gly Val Pro Gln Val Ile Thr Gln Glu Tyr Leu Ala
 405 410 415

Pro Glu Met Val Met Gln Lys Pro Tyr Gly Met Ala Ala Asp Trp Trp
 420 425 430

Ser Leu Gly Val Leu Met Phe Glu Leu Leu Thr Gly Ser Pro Pro Phe
 435 440 445

His Ser Val Glu Gln Gly Glu Leu Phe Arg Gln Ile Leu Glu Ala Pro
 450 455 460

Ile Lys Phe Pro Ala Gly Gly Cys Ile Thr Glu Glu Ala Lys Asp Phe
 465 470 475 480

Ile Cys Gln Leu Leu Glu Arg Asp Pro Ala Lys Arg Leu Gly Ser His
 485 490 495

Gly Asp Val Ala Gln Val Lys Ala His Pro Phe Phe Lys Asp Leu Asn
 500 505 510

Trp Asp Val Val Tyr Lys Lys Gln Met Gln Leu Pro Phe Val Pro Glu
 515 520 525

Val Glu Glu Gln Leu Arg Glu Glu Ala Ile Ala Ala Ala Ala Ile
 530 535 540

Ser Ile Pro Val Thr Asn Ser Lys Thr Glu Ser Thr Asn Ala Asn Val
 545 550 555 560

Met Pro Val Ala Asp Gln Ser Lys Phe Lys Gly Phe Ser Tyr Ile Arg
 565 570 575

Glu Asp Val Met Ala Lys Lys Gly Glu His Arg Leu Gly Val Asn Pro
 580 585 590

Glu Asp Glu Asp Pro Glu Val Asp Phe Trp Phe Arg Gln
 595 600 605

<210> 44
 <211> 480
 <212> PRT

<213> Aspergillus niger

<400> 44

Met Pro Ser Leu Gly Gly Leu Leu Lys Lys Arg Arg Thr Lys Asp Ser
 1 5 10 15

Gln Thr Leu Ser Lys Glu Leu Glu Ala Gly Ser Ala Gln Thr Gln Thr
 20 25 30

Ser Pro Asn Ala Ala Glu Asp His His Asn His Asn His Gln His
 35 40 45

His His His Leu Phe His His His Gln Pro Gln Pro Ala Thr Asn
 50 55 60

Ser Gly Ser Ala Ala Asn Thr Pro Pro Gln Pro Gln Asp Ser Val Pro
 65 70 75 80

Gln Gln Ser Asn Arg Ser Ser Gly Ala Glu Lys Ser Ser Asp Gly Gln
 85 90 95

Val Ala Ser Met Gln Ser Ala Val Thr Gln Ala Ser Pro Ser Ala His
 100 105 110

His Thr Ser Gly Leu Pro Gln Pro Asn Ala Asn Ala Ser Ile Gln
 115 120 125

Asn Ile Ile Asn Pro Ser Gln Gln Gly Ala Met His Ser Ala Ser Ser
 130 135 140

Gly His Thr Gln Ser His His Ala Gly Arg Ser Asp Ala Arg Thr Thr
 145 150 155 160

Lys Gly Lys Tyr Ser Leu Asp Asp Phe Ser Leu Gln Arg Thr Leu Gly
 165 170 175

Thr Gly Ser Phe Gly Arg Val His Leu Val Gln Ser Lys His Asn His
 180 185 190

Arg Phe Tyr Ala Val Lys Val Leu Lys Lys Ala Gln Val Val Lys Met
 195 200 205

Lys Gln Ile Glu His Thr Asn Asp Glu Arg Arg Met Leu Asn Arg Val
 210 215 220

Arg His Pro Phe Leu Ile Thr Leu Trp Gly Thr Trp Gln Asp Ser Arg
 225 230 235 240

Asn Leu Tyr Met Val Met Asp Phe Val Glu Gly Gly Glu Leu Phe Ser
 245 250 255

Leu Val Arg Lys Ser Gln Arg Phe Pro Asn Pro Val Ala Lys Phe Tyr
 260 265 270

Ala Ala Glu Val Thr Leu Ala Leu Glu Tyr Leu His Thr Gln Asn Ile
 275 280 285

Ile Tyr Arg Asp Leu Lys Pro Glu Asn Leu Leu Asp Arg His Gly
 290 295 300

His Leu Lys Ile Thr Asp Phe Gly Phe Ala Lys Glu Val Pro Asp Ile
 305 310 315 320

Thr Trp Thr Leu Cys Gly Thr Pro Asp Tyr Leu Ala Pro Glu Val Val
 325 330 335

Ser Ser Lys Gly Tyr Asn Lys Ser Val Asp Trp Trp Ser Leu Gly Ile
 340 345 350

Leu Ile Phe Glu Met Leu Cys Gly Phe Thr Pro Phe Trp Asp Ser Gly
 355 360 365

Ser Pro Val Lys Ile Tyr Glu Asn Ile Leu Arg Gly Arg Val Lys Tyr
 370 375 380

Pro Pro Tyr Leu His Pro Asp Ala Val Asp Leu Leu Ser Gln Leu Ile
 385 390 395 400

Thr Ala Asp Leu Thr Lys Arg Leu Gly Asn Leu His Gly Gly Ser Asp
 405 410 415

Asp Val Lys Asn His Pro Trp Phe Ala Glu Val Thr Trp Asp Arg Leu
 420 425 430

Ala Arg Lys Asp Ile Asp Ala Pro Tyr Val Pro Pro Ile Arg Gly Gly
 435 440 445

Gln Gly Asp Ala Ser Gln Tyr Asp Arg Tyr Pro Glu Glu Thr Glu Gln
 450 455 460

Tyr Gly Met Ala Gly Glu Asp Pro His Gly His Leu Phe Pro Asp Phe
 465 470 475 480

<210> 45
 <211> 425
 <212> PRT
 <213> Blastocadiella emersonii

<400> 45

Met Thr Leu Ile Asp Lys Leu Met Glu Lys Thr Lys Lys Val Val Gly
 1 5 10 15

Ser Ser Asp Lys Asp Ala Pro Ala Pro Ala Ser Pro Ser Ser Pro Ser
 20 25 30

Thr Ala Ala Gly Ala Gly Ser Ala Ser Ser Thr Ala Ser Ser Thr Thr
 35 40 45

Thr Ala Ala Ala Ser Gly Asn Leu Ser Ile Pro Ser Pro Leu Val Ala
 50 55 60

Gly Ser Thr Thr Ser Ser Ser Ile Ser His Ala Gln Lys Met Ala Thr
 65 70 75 80

Ala Ala His Thr Asn Ser Asp Tyr Ser Pro Ser Pro Ala Ala Thr Pro
 85 90 95

Ser Ala Pro Leu Asp Ala Val Ala Glu Arg Arg Arg Arg Lys Thr Thr
 100 105 110

Leu Ala Asp Leu Glu Leu Arg Gln Thr Leu Gly Thr Gly Ser Phe Gly
 115 120 125

Arg Val His Leu Val Arg Leu Arg Ser Thr Gly Lys Tyr Tyr Ala Met
 130 135 140

Lys Val Leu Lys Lys Ala Glu Val Val Lys His Lys Gln Val Glu His
 145 150 155 160

Thr Leu Asn Glu Lys Gly Ile Leu Glu Gln Ile Asp His Pro Phe Leu
 165 170 175

Val Ala Leu His Ser Ser Phe Gln Asp Ser Ala Asn Leu Tyr Met Val
 180 185 190

Met Glu Tyr Val Thr Gly Gly Glu Leu Phe Thr Tyr Leu Arg Arg Ser
 195 200 205

Gln Arg Phe Ser Asn Asn Val Ala Lys Phe Tyr Ala Ala Glu Val Val
 210 215 220

Leu Ala Phe Glu Tyr Leu His Ser Lys Asp Ile Ile Tyr Arg Asp Leu
 225 230 235 240

Lys Pro Glu Asn Leu Leu Asp Ala Gln Gly His Val Lys Ile Thr
 245 250 255

Asp Phe Gly Phe Ala Lys His Val Pro Asp Ile Thr Trp Thr Leu Cys
 260 265 270

Gly Thr Pro Asp Tyr Leu Ala Pro Glu Ile Ile Gln Ser Arg Gly Tyr
 275 280 285

Gly Arg Ala Val Asp Trp Tyr Ala Leu Gly Val Leu Ile Phe Glu Met
 290 295 300

Leu Ala Gly Tyr Pro Pro Phe Tyr Asp Glu Asp His Val Arg Met Tyr
 305 310 315 320

Glu Lys Ile Leu Gln Gly Lys Val Lys Trp Pro Ser His Phe Asp Pro
 325 330 335

Ala Ala Lys Asp Leu Leu Lys Arg Leu Leu Thr Thr Asp Leu Thr Lys
 340 345 350

Arg Tyr Gly Asn Leu Lys Gly Gly Ser Lys Asp Ile Lys Met His Lys
 355 360 365

Trp Phe Ala Gly Leu Asp Trp Thr Lys Leu Phe Asn Lys Gln Ile Pro
 370 375 380

Pro Pro Tyr Thr Pro Pro Asn Arg Gly Asp Gly Asp Thr Ser Asn Phe
 385 390 395 400

Asp Ala Tyr Pro Glu Glu Thr Glu Pro Tyr Gly Lys Val Gln Pro Asp

405

410

415

Pro Tyr Ala Gln Leu Phe Lys Asp Phe
 420 425

<210> 46
 <211> 442
 <212> PRT
 <213> Candida albicans

<400>. 46

Met Val Asn Leu Leu Lys Lys Leu His Ile Thr Lys Ser His Gln Ser
 1 5 10 15

Asn His Ser Asn Ser Asp Ser Asn Ser Leu Asn Ser Asn Thr Ser Met
 20 25 30

Asp Asn His Gln Gln Gln Gln Leu Gln Gln Tyr Gln Gln Gln Phe
 35 40 45

Gln Gln Pro Gln Gln Gln Leu Tyr Pro Gly Glu Gln Ile Val His Pro
 50 55 60

Ala Ala Ala Gln Thr Gly Gln Asn Thr Thr Asn Val Thr Ala Val Ser
 65 70 75 80

Ser Ser Asn Ile Thr Gln Ser Ala Thr Ser Ser Leu His Ser Gln Gln
 85 90 95

Leu Gln His Val Asp Val Ser Lys Ser Ala Ala Glu Glu Ala Ile Arg
 100 105 110

Arg Ser Leu Leu Pro Glu Arg Ser Thr Val Ser Lys Gly Lys Tyr Ser
 115 120 125

Leu Thr Asp Phe Ser Ile Met Arg Thr Leu Gly Thr Gly Ser Phe Gly
 130 135 140

Arg Val His Leu Val Arg Ser Val His Asn Gly Arg Tyr Tyr Ala Ile
 145 150 155 160

Lys Val Leu Lys Lys His Gln Val Val Lys Met Lys Gln Val Glu His
 165 170 175

Thr Asn Asp Glu Arg Arg Met Leu Lys Leu Val Glu His Pro Phe Leu
 180 185 190

Ile Arg Met Trp Gly Thr Phe Gln Asp Ser Lys Asn Leu Phe Met Val
 195 200 205

Met Asp Tyr Ile Glu Gly Gly Glu Leu Phe Ser Leu Leu Arg Lys Ser
 210 215 220

Gln Arg Phe Pro Asn Pro Val Ala Lys Phe Tyr Ala Ala Glu Val Thr
 225 230 235 240

Leu Ala Leu Glu Tyr Leu His Ser His Asp Ile Ile Tyr Arg Asp Leu
 245 250 255

Lys Pro Glu Asn Ile Leu Leu Asp Arg Asn Gly His Ile Lys Ile Thr
 260 265 270

Asp Phe Gly Phe Ala Lys Glu Val Ser Thr Val Thr Trp Thr Leu Cys
 275 280 285

Gly Thr Pro Asp Tyr Ile Ala Pro Glu Val Ile Thr Thr Lys Pro Tyr
 290 295 300

Asn Lys Ser Val Asp Trp Trp Ser Leu Gly Val Leu Ile Phe Glu Met
 305 310 315 320

Leu Ala Gly Tyr Thr Pro Phe Tyr Asp Ser Thr Pro Met Lys Thr Tyr
 325 330 335

Glu Lys Ile Leu Ala Gly Lys Ile His Tyr Pro Ser Phe Phe Gln Pro
 340 345 350

Asp Val Ile Asp Leu Leu Thr Lys Leu Ile Thr Ala Asp Leu Thr Arg
 355 360 365

Arg Leu Gly Asn Leu Ile Asn Gly Pro Ala Asp Ile Arg Asn His Pro
 370 375 380

Trp Phe Ser Glu Val Val Trp Glu Lys Leu Leu Ala Lys Asp Ile Glu
 385 390 395 400

Thr Pro Tyr Glu Pro Pro Ile Thr Ala Gly Val Gly Asp Ser Ser Leu
 405 410 415

Phe Asp His Tyr Pro Glu Glu Gln Leu Asp Tyr Gly Ser Gln Gly Glu
 420 425 430

Asp Pro Tyr Ala Ser Tyr Phe Leu Asp Phe
 435 440

<210> 47
 <211> 380
 <212> PRT
 <213> *Saccharomyces cerevisiae*

<400> 47

Met Glu Phe Val Ala Glu Arg Ala Gln Pro Val Gly Gln Thr Ile Gln
 1 5 10 15

Gln Gln Asn Val Asn Thr Tyr Gly Gln Gly Val Leu Gln Pro His His
 20 25 30

Asp Leu Gln Gln Arg Gln Gln Gln Gln Arg Gln His Gln Gln
 35 40 45

Leu Leu Thr Ser Gln Leu Pro Gln Lys Ser Leu Val Ser Lys Gly Lys
 50 55 60

Tyr Thr Leu His Asp Phe Gln Ile Met Arg Thr Leu Gly Thr Gly Ser
 65 70 75 80

Phe Gly Arg Val His Leu Val Arg Ser Val His Asn Gly Arg Tyr Tyr
 85 90 95

Ala Ile Lys Val Leu Lys Lys Gln Gln Val Val Lys Met Lys Gln Val
 100 105 110

Glu His Thr Asn Asp Glu Arg Arg Met Leu Lys Leu Val Glu His Pro
 115 120 125

Phe Leu Ile Arg Met Trp Gly Thr Phe Gln Asp Ala Arg Asn Ile Phe
 130 135 140

Met Val Met Asp Tyr Ile Glu Gly Gly Glu Leu Phe Ser Leu Leu Arg
 145 150 155 160

Lys Ser Gln Arg Phe Pro Asn Pro Val Ala Lys Phe Tyr Ala Ala Glu

165	170	175
Val Ile Leu Ala Leu Glu Tyr Leu His Ala His Asn Ile Ile Tyr Arg		
180	185	190
Asp Leu Lys Pro Glu Asn Ile Leu Leu Asp Arg Asn Gly His Ile Lys		
195	200	205
Ile Thr Asp Phe Gly Phe Ala Lys Glu Val Gln Thr Val Thr Trp Thr		
210	215	220
Leu Cys Gly Thr Pro Asp Tyr Ile Ala Pro Glu Val Ile Thr Thr Lys		
225	230	235
Pro Tyr Asn Lys Ser Val Asp Trp Trp Ser Leu Gly Val Leu Ile Tyr		
245	250	255
Glu Met Leu Ala Gly Tyr Thr Pro Phe Tyr Asp Thr Thr Pro Met Lys		
260	265	270
Thr Tyr Glu Lys Ile Leu Gln Gly Lys Val Val Tyr Pro Pro Tyr Phe		
275	280	285
His Pro Asp Val Val Asp Leu Leu Ser Lys Leu Ile Thr Ala Asp Leu		
290	295	300
Thr Arg Arg Ile Gly Asn Leu Gln Ser Gly Ser Arg Asp Ile Lys Ala		
305	310	320
His Pro Trp Phe Ser Glu Val Val Trp Glu Arg Leu Leu Ala Lys Asp		
325	330	335
Ile Glu Thr Pro Tyr Glu Pro Pro Ile Thr Ser Gly Ile Gly Asp Thr		
340	345	350
Ser Leu Phe Asp Gln Tyr Pro Glu Glu Gln Leu Asp Tyr Gly Ile Gln		
355	360	365
Gly Asp Asp Pro Tyr Ala Glu Tyr Phe Gln Asp Phe		
370	375	380

<210> 48
<211> 512
<212> PRT

<213> Schizosaccharomyces pombe

<400> 48

Met Asp Thr Thr Ala Val Ala Ser Lys Gly Ser Thr Asn Val Gly Ser
1 5 10 15

Ser Thr Asp Thr Leu Ser Thr Ser Ala Ser Leu His Pro Ser Met Asn
20 25 30

Ala Gly Ser Val Asn Glu Tyr Ser Glu Gln Gln Arg His Gly Thr Asn
35 40 45

Ser Phe Asn Gly Lys Pro Ser Val His Asp Ser Val Gly Ser Asp Ala
50 55 60

Ser Val Ser Asn Gly His Asn Asn His Asn Glu Ser Ser Leu Trp Thr
65 70 75 80

Ser Gly Ile Pro Lys Ala Leu Glu Glu Ala Thr Lys Ser Lys Lys Pro
85 90 95

Asp Ser Leu Val Ser Thr Ser Thr Ser Gly Cys Ala Ser Ala His Ser
100 105 110

Val Gly Tyr Gln Asn Ile Asp Asn Leu Ile Pro Ser Pro Leu Pro Glu
115 120 125

Ser Ala Ser Arg Ser Ser Ser Gln Ser Ser His Gln Arg His Ser Arg
130 135 140

Asp Gly Arg Gly Glu Leu Gly Ser Glu His Gly Glu Arg Arg Ser Ala
145 150 155 160

Met Asp Gly Leu Arg Asp Arg His Ile Arg Lys Val Arg Val Ser Gln
165 170 175

Leu Leu Asp Leu Gln Arg Arg Arg Ile Arg Pro Ala Asp His Thr Thr
180 185 190

Lys Asp Arg Tyr Gly Ile Gln Asp Phe Asn Phe Leu Gln Thr Leu Gly
195 200 205

Thr Gly Ser Phe Gly Arg Val His Leu Val Gln Ser Asn His Asn Arg
210 215 220

Leu Tyr Tyr Ala Ile Lys Val Leu Glu Lys Lys Lys Ile Val Asp Met
 225 230 235 240

Lys Gln Ile Glu His Thr Cys Asp Glu Arg Tyr Ile Leu Ser Arg Val
 245 250 255

Gln His Pro Phe Ile Thr Ile Leu Trp Gly Thr Phe Gln Asp Ala Lys
 260 265 270

Asn Leu Phe Met Val Met Asp Phe Ala Glu Gly Gly Glu Leu Phe Ser
 275 280 285

Leu Leu Arg Lys Cys His Arg Phe Pro Glu Lys Val Ala Lys Phe Tyr
 290 295 300

Ala Ala Glu Val Ile Leu Ala Leu Asp Tyr Leu His His Asn Gln Ile
 305 310 315 320

Val Tyr Arg Asp Leu Lys Pro Glu Asn Leu Leu Leu Asp Arg Phe Gly
 325 330 335

His Leu Lys Ile Val Asp Phe Gly Phe Ala Lys Arg Val Ser Thr Ser
 340 345 350

Asn Cys Cys Thr Leu Cys Gly Thr Pro Asp Tyr Leu Ala Pro Glu Ile
 355 360 365

Ile Ser Leu Lys Pro Tyr Asn Lys Ala Ala Asp Trp Trp Ser Leu Gly
 370 375 380

Ile Leu Ile Phe Glu Met Leu Ala Gly Tyr Pro Pro Phe Tyr Ser Glu
 385 390 395 400

Asn Pro Met Lys Leu Tyr Glu Asn Ile Leu Glu Gly Lys Val Asn Tyr
 405 410 415

Pro Ser Tyr Phe Ser Pro Ala Ser Ile Asp Leu Leu Ser His Leu Leu
 420 425 430

Gln Arg Asp Ile Thr Cys Arg Tyr Gly Asn Leu Lys Asp Gly Ser Met
 435 440 445

Asp Ile Ile Met His Pro Trp Phe Arg Asp Ile Ser Trp Asp Lys Ile
 450 455 460

Leu Thr Arg Lys Ile Glu Val Pro Tyr Val Pro Pro Ile Gln Ala Gly
 465 470 475 480

Met Gly Asp Ser Ser Gln Phe Asp Ala Tyr Ala Asp Val Ala Thr Asp
 485 490 495

Tyr Gly Thr Ser Glu Asp Pro Glu Phe Thr Ser Ile Phe Lys Asp Phe
 500 505 510

<210> 49
<211> 70
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 49
tttctctctt tcagggtttt tttcttcttc ttccatactat atctctatat attttataaa 60
tctcgagatg 70

<210> 50
<211> 125
<212> PRT
<213> Mucor circinelloides

<400> 50

Lys Phe Phe Leu Ala Thr Ala Pro Val Asn Trp Glu His Asn Lys Pro
1 5 10 15

Leu Lys Arg Phe Ala Leu Pro Gly Gly Ser Ala Ala Ala Pro Gly
20 25 30

Gly Arg Ser Pro Asn Gly Ser Gly Glu Ser Ile Ser Cys Val Leu Trp
35 40 45

Asn Asp Leu Phe Phe Ile Thr Gly Thr Asp Ile Val Arg Ser Leu Thr
50 55 60

Phe Arg Phe His Ala Phe Gly Arg Pro Val Thr Asn Ala Lys Lys Phe
65 70 75 80

Glu Glu Gly Ile Phe Ser Asp Leu Arg Asn Leu Lys Pro Gly His Asp

85

90

95

Ala Arg Leu Glu Glu Pro Lys Ser Glu Leu Leu Asp Met Leu Tyr Lys
 100 105 110

Asn Asn Cys Ile Arg Thr Gln Lys Lys Gln Lys Val Phe
 115 120 125

<210> 51
<211> 111
<212> PRT
<213> *Saccharomyces cerevisiae*

<400> 51

Lys Phe Phe Leu Ala Thr Ala Pro Val Asn Trp Gln Glu Asn Gln Ile
 1 5 10 15

Ile Arg Arg Tyr Tyr Leu Asn Ser Gly Gln Gly Phe Val Ser Cys Val
 20 25 30

Phe Trp Asn Asn Leu Tyr Tyr Ile Thr Gly Thr Asp Ile Val Lys Cys
 35 40 45

Cys Leu Tyr Arg Met Gln Lys Phe Gly Arg Glu Val Val Gln Lys Lys
 50 55 60

Lys Phe Glu Glu Gly Ile Phe Ser Asp Leu Arg Asn Leu Lys Cys Gly
 65 70 75 80

Ile Asp Ala Thr Leu Glu Gln Pro Lys Ser Glu Phe Leu Ser Phe Leu
 85 90 95

Phe Arg Asn Met Cys Leu Lys Thr Gln Lys Lys Gln Lys Val Phe
 100 105 110

<210> 52
<211> 111
<212> PRT
<213> *Candida albicans*
<400> 52

Lys Phe Phe Leu Ala Thr Ala Pro Ala Asn Trp Gln Glu Asn Gln Val
 1 5 10 15

Ile Arg Arg Tyr Tyr Leu Asn His Asp Glu Gly Phe Val Ser Cys Val

20

25

30

Tyr Trp Asn Asn Leu Tyr Phe Ile Thr Gly Thr Asp Ile Val Arg Cys
 35 40 45

Ile Val Tyr Lys Phe Glu His Phe Gly Arg Lys Ile Ile Asp Arg Lys
 50 55 60

Lys Phe Glu Glu Gly Ile Phe Ser Asp Leu Arg Asn Leu Lys Cys Gly
 65 70 75 80

Ala Asp Ala Ile Leu Glu Pro Pro Arg Ser Glu Phe Leu Glu Phe Leu
 85 90 95

Phe Lys Asn Ser Cys Leu Arg Thr Gln Lys Lys Gln Lys Val Phe
 100 105 110

<210> 53

<211> 111

<212> PRT

<213> Kluyveromyces lactis

<400> 53

Lys Phe Phe Leu Ala Thr Arg Pro Ala Asn Trp Gln Glu Asn Gln Val
 1 5 10 15

Ile Arg Arg Tyr Tyr Leu Ser Asn Asp Glu Gly Phe Val Ser Cys Val
 20 25 30

Phe Trp Asn Asn Leu Tyr Tyr Ile Thr Gly Thr Asp Ile Val Arg Cys
 35 40 45

Cys Ala Tyr Arg Met Gln Lys Phe Gly Arg Glu Ile Val Glu Arg Lys
 50 55 60

Lys Phe Glu Glu Gly Ile Phe Ser Asp Leu Arg Asn Leu Lys Cys Gly
 65 70 75 80

Ile Asp Ala Thr Leu Glu Lys Pro Lys Ser Asp Leu Leu Ala Phe Leu
 85 90 95

Tyr Lys Asn Met Cys Leu Lys Thr Gln Lys Lys Gln Lys Val Phe
 100 105 110

<210> 54
<211> 110
<212> PRT
<213> Aspergillus nidulans

<400> 54

Lys Tyr Phe Leu Leu Ser Ala Pro Val Asp Trp Gln Pro Asp Gln Leu
1 5 10 15

Ile Arg Arg Phe Leu Leu Pro Thr Gly Asp Tyr Ile Ser Cys Val Leu
20 25 30

Trp Ser Asn Leu Phe His Ile Ser Gly Thr Asp Ile Val Arg Cys Leu
35 40 45

Ala Phe Arg Phe Gln Ala Phe Gly Arg Pro Val Lys Asn Ser Lys Lys
50 55 60

Phe Glu Glu Gly Ile Phe Ser Asp Leu Arg Asn Leu Lys Ala Gly Thr
65 70 75 80

Asp Ala Thr Leu Glu Glu Pro Lys Ser Pro Phe Leu Asp Phe Leu Tyr
85 90 95

Lys Asn Asn Cys Ile Arg Thr Gln Lys Lys Gln Lys Val Phe
100 105 110

<210> 55
<211> 111
<212> PRT
<213> Clavicipitaria lusitaniae

<400> 55

Lys Phe Phe Leu Ala Thr Ala Pro Ala Asn Trp Gln Glu Asn Gln Val
1 5 10 15

Ile Arg Arg Tyr Tyr Leu Asn Asn Asp Glu Gly Phe Val Ser Cys Val
20 25 30

Phe Trp Asn Asn Leu Tyr Phe Val Thr Gly Thr Asp Ile Val Arg Cys
35 40 45

Ile Leu Tyr Lys Phe Gln His Phe Gly Arg Thr Ile Thr Asp Arg Lys
50 55 60

Lys Phe Glu Glu Gly Ile Phe Ser Asp Leu Arg Asn Leu Lys Ala Gly
 65 70 75 80

Ser Asp Ser Val Leu Glu Glu Pro Lys Ser Pro Phe Leu Glu Phe Leu
 85 90 95

Tyr Asn Asn Ser Cys Leu Arg Thr Gln Lys Lys Gln Lys Val Phe
 100 105 110

<210> 56
<211> 103
<212> PRT
<213> Mucor circinelloides

<400> 56

Tyr Ile Val Gln Glu Ile Met Glu Ala Asp Leu His Gln Ile Ile Arg
 1 5 10 15

Ser Gly Gln Pro Leu Thr Asp Ala His Phe Gln Tyr Phe Val Tyr Gln
 20 25 30

Ile Cys Arg Gly Leu Lys Tyr Ile His Ser Ala Asn Val Leu His Arg
 35 40 45

Asp Leu Lys Pro Gly Lys Leu Arg Ile Asn Gly Ile Thr Gln Ile Thr
 50 55 60

Glu Pro Lys Ile Cys Asp Phe Gly Leu Ala Arg Gly Tyr Ser Glu Asn
 65 70 75 80

Asp Glu His Asn Val Gly Phe Met Thr Glu Tyr Val Ala Thr Arg Trp
 85 90 95

Tyr Arg Ala Pro Glu Ile Met
 100

<210> 57
<211> 100
<212> PRT
<213> Schizosaccharomyces pombe

<400> 57

Tyr Ile Tyr Glu Glu Leu Met Glu Ala Asp Leu Asn Ala Ile Ile Lys
 1 5 10 15

Ser Gly Gln Pro Leu Thr Asp Ala His Phe Gln Ser Phe Ile Tyr Gln
 20 25 30

Ile Leu Cys Gly Leu Lys Tyr Ile His Ser Ala Asn Val Ile His Arg
 35 40 45

Asp Leu Lys Pro Gly Asn Leu Leu Val Asn Ala Asp Cys Glu Leu Lys
 50 55 60

Ile Cys Asp Phe Gly Leu Ala Arg Gly Cys Ser Glu Asn Pro Glu Glu
 65 70 75 80

Asn Pro Gly Phe Met Thr Glu Tyr Val Ala Thr Arg Trp Tyr Arg Ala
 85 90 95

Pro Glu Ile Met
 100

<210> 58
 <211> 100
 <212> PRT
 <213> Candida albicans

<400> 58

Tyr Leu Tyr Glu Glu Leu Met Glu Cys Asp Met His Gln Ile Ile Arg
 1 5 10 15

Ser Gly Gln Pro Leu Ser Asp Gln His Tyr Gln Ser Phe Ile Tyr Gln
 20 25 30

Val Leu Cys Gly Leu Asn Phe Ile His Ser Ala Asp Val Leu His Arg
 35 40 45

Asp Leu Lys Pro Gly Asn Leu Leu Val Asn Ala Asp Cys Glu Leu Lys
 50 55 60

Ile Cys Asp Phe Gly Leu Ala Arg Gly Phe Ser Glu Asn Pro Asp Glu
 65 70 75 80

Asn Ala Gly Phe Met Thr Glu Tyr Val Ala Thr Arg Trp Tyr Arg Ala
 85 90 95

Pro Glu Ile Met
 100

<210> 59
<211> 98
<212> PRT
<213> *Fusarium oxysporum*

<400> 59

Tyr Leu Ile Gln Glu Leu Met Glu Thr Asp Met His Arg Val Ile Arg
1 5 10 15

Thr Gln Asp Leu Ser Asp Asp His Cys Gln Tyr Phe Ile Tyr Gln Thr
20 25 30

Leu Arg Ala Leu Lys Ala Met His Ser Ala Asn Val Leu His Arg Asp
35 40 45

Leu Lys Pro Ser Asn Leu Leu Asn Ala Asn Cys Asp Leu Lys Val
50 55 60

Cys Asp Phe Gly Leu Ala Arg Ser Ala Ala Ser Gln Glu Asp Asn Ser
65 70 75 80

Gly Phe Met Thr Glu Tyr Val Ala Thr Arg Trp Tyr Arg Ala Pro Glu
85 90 95

Ile Met

<210> 60
<211> 100
<212> PRT
<213> *Saccharomyces cerevisiae*

<400> 60

Tyr Leu Tyr Glu Glu Leu Met Glu Cys Asp Met His Gln Ile Ile Lys
1 5 10 15

Ser Gly Gln Pro Leu Thr Asp Ala His Tyr Gln Ser Phe Thr Tyr Gln
20 25 30

Ile Leu Cys Gly Leu Lys Tyr Ile His Ser Ala Asp Val Leu His Arg
35 40 45

Asp Leu Lys Pro Gly Asn Leu Leu Val Asn Ala Asp Cys Gln Leu Lys
50 55 60

Ile Cys Asp Phe Gly Leu Ala Arg Gly Tyr Ser Glu Asn Pro Val Glu
 65 70 75 80

Asn Ser Gln Phe Leu Thr Glu Tyr Val Ala Thr Arg Trp Tyr Arg Ala
 85 90 95

Pro Glu Ile Met
 100

<210> 61
<211> 98
<212> PRT
<213> Candida albicans

<400> 61

Tyr Leu Ile Gln Glu Leu Met Glu Thr Asp Leu His Arg Val Ile Arg
 1 5 10 15

Thr Gln Asn Leu Ser Asp Asp His Ile Gln Tyr Phe Ile Tyr Gln Thr
 20 25 30

Leu Arg Ala Leu Lys Ala Met His Ser Ala Asn Val Leu His Arg Asp
 35 40 45

Leu Lys Pro Ser Asn Leu Leu Asn Ser Asn Cys Asp Leu Lys Ile
 50 55 60

Cys Asp Phe Gly Leu Ala Arg Ser Ile Ala Ser Gln Glu Asp Asn Tyr
 65 70 75 80

Gly Phe Met Thr Glu Tyr Val Ala Thr Arg Trp Tyr Arg Ala Pro Glu
 85 90 95

Ile Met

<210> 62
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> consensus sequence

<220>
<221> misc_feature

<222> (3)..(3)
<223> Xaa can be any amino acid

<220>
<221> misc_feature
<222> (5)..(6)
<223> Xaa can be any amino acid

<220>
<221> misc_feature
<222> (8)..(8)
<223> Xaa can be any amino acid

<220>
<221> misc_feature
<222> (10)..(11)
<223> Xaa can be any amino acid

<400> 62

Ile Ser Xaa Pro Xaa Xaa Phe Xaa His Xaa Xaa His Val Gly
1 5 10

<210> 63
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> consensus sequence

<220>
<221> misc_feature
<222> (3)..(3)
<223> Xaa can be any amino acid

<220>
<221> misc_feature
<222> (5)..(8)
<223> Xaa can be any amino acid

<220>
<221> misc_feature
<222> (10)..(10)
<223> Xaa can be any amino acid

<220>
<221> misc_feature
<222> (12)..(13)
<223> Xaa can be any amino acid

<400> 63

Ile	Ser	Xaa	Pro	Xaa	Xaa	Xaa	Xaa	Phe	Xaa	His	Xaa	Xaa	His	Val	Gly
1				5					10					15	

<210> 64

<211> 99

<212> PRT

<213> Artificial Sequence

<220>

<223> consensus sequence

<220>

<221> misc_feature

<222> (2) .⁻ (11)

<223> Xaa can be any amino acid

<220>

<221> misc_feature

<222> (14) $\bar{.}$ (85)

<223> Xaa can be any amino acid

<220>

<221> misc feature

<222> (88) $\bar{.}$ (88)

<223> Xaa can be any amino acid

<220>

<221> misc feature

<222> (90) . (98)

<223> Xaa can be any amino acid

<400> 64

Xaa
 65 70 75 80

Xaa Xaa Xaa Xaa Xaa Arg Asp Xaa Lys Xaa Xaa Xaa Xaa Xaa Xaa
 85 90 95

Xaa Xaa Cys

<210> 65
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> consensus sequence

<220>
<221> misc_feature
<222> (2)..(11)
<223> Xaa can be any amino acid

<220>
<221> misc_feature
<222> (14)..(99)
<223> Xaa can be any amino acid

<220>
<221> misc_feature
<222> (102)..(102)
<223> Xaa can be any amino acid

<220>
<221> misc_feature
<222> (104)..(112)
<223> Xaa can be any amino acid

<400> 65

Phe Xaa Arg Glu Xaa Xaa Xaa
 1 5 10 15

Xaa
 20 25 30

Xaa
 35 40 45

Xaa
50 55 60

Xaa
65 70 75 80

Xaa
85 90 95

Xaa Xaa Xaa Arg Asp Xaa Lys Xaa Xaa Xaa Xaa Xaa Xaa Xaa
100 105 110

Cys